JOURNAL
OF AMERICAN INSURANCE

APRIL, 1961 Vol. 37, No. 4

Wonderful Williamsburg

How Astronauts Will Eat

Safeguarding Our Hospitals

They've Made Burgling Tough

This Knowledge Is Insured

Tranquillity for Travelers

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Photo Virginia Chamber of Commerce

OUR COVERS

IT IS JUST AFTER 4:30 a. m. on April 12, 100 years ago, in the scene on our front cover. Confederate forces have now opened fire on Fort Sumter, the Union fortification on a sand bar at the harbor mouth of Charleston, South Carolina, in the opening engagement of the Civil War. That scene and those which followed during "the supreme experience in our history as a nation" are now being commemorated in the 1961-1965 Civil War Centennial.

Fort Sumter gallantly resisted the bombardment for 34 hours and then surrendered with the honors of war. It was not to fly the U. S. flag again until April 14, 1865. In the meantime this one engagement had proliferated into the 6,000 that were to be fought before the day of war's end and a reunited nation.

What transpired out of Fort Sumter to be hallowed this Centennial and for all time is an America echoing the sentiments and supplication of Katherine Lee Bates. Her verse on the back cover is superimposed on a view of Cumberland National Historical Park in southwest Virginia where Cumberland Gap was a strategic point during the Civil War. ⊙

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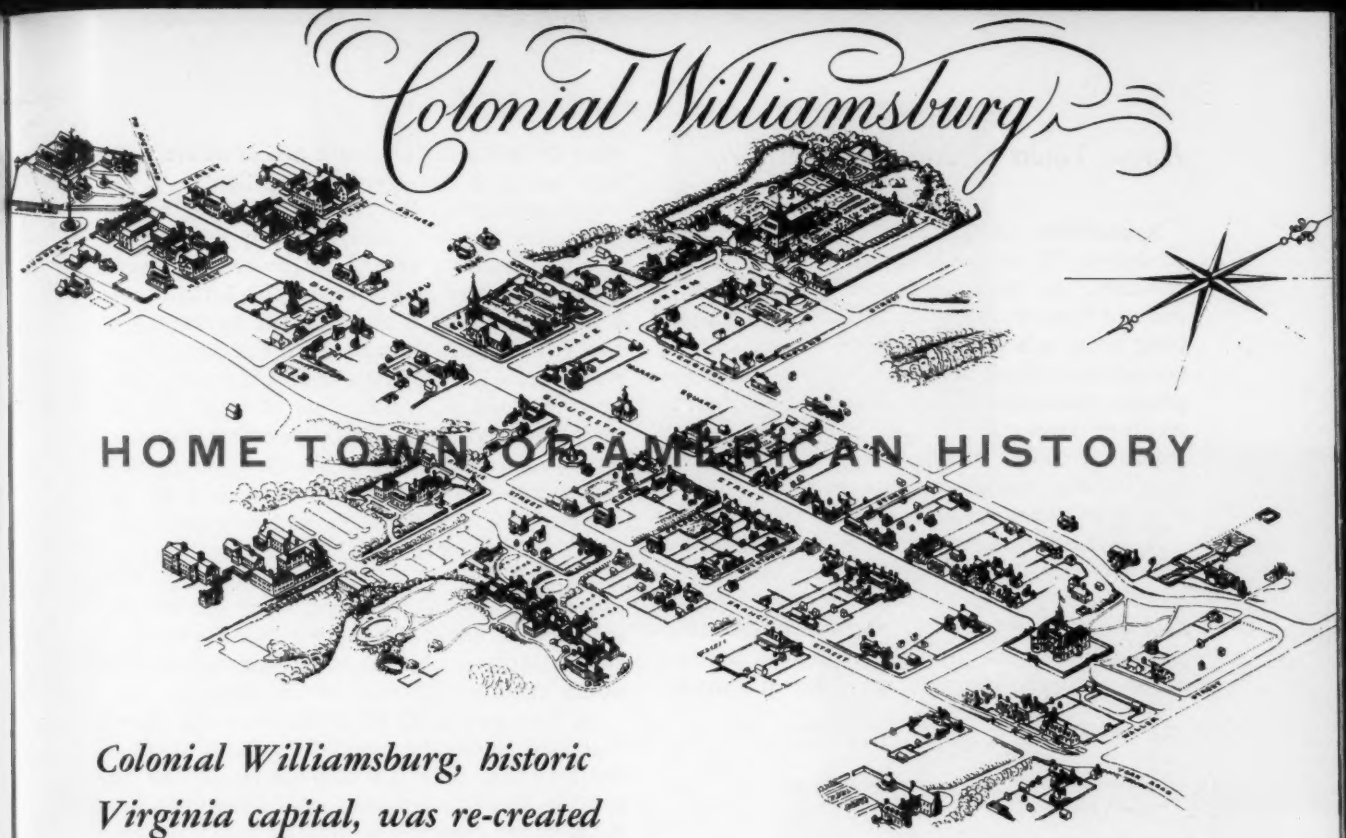
Colonial Williamsburg



HOME TOWN OF AMERICAN HISTORY

Colonial Williamsburg, historic Virginia capital, was re-created with the help of insurance artifacts.

"A morsel of genuine history is a thing so rare as to be always valuable."

NOWHERE IS THIS MAXIM of Thomas Jefferson's better glorified to the enjoyment of all Americans and to the wonder of the world than at Williamsburg. Famous as the 18th-century capital of Virginia and the summit city for colonial planters and statesmen who shaped American history, it has been beautifully re-created in the Rockefeller restoration that began in 1926.

The rare morsels of genuine history which have become forever valuable with the restoration were gleaned from the well-preserved records and policies of a mutual insurance company. From those records, supplementing evidence from other sources, the historians, architects and archeologists pieced together the giant jigsaw puzzle restoring Williamsburg to the charm and prestige reminiscent of the era of its greatest historical importance.

So much genuine history has been recaptured at Colonial Williamsburg that it has to be seen to be savored. Encompassed are 130 acres and more than 500 buildings. George Washington, Patrick Henry, Thomas Jefferson, George Wythe, George Mason and others knew it as the statesmen of today know Washington, Paris, London and Geneva.

It was at nearby Richmond almost 200 hundred years ago that Patrick Henry, in condemnation of the Stamp Act, said, "If this be treason, make the most of it." Later the Raleigh Tavern at Williamsburg was the rallying place where Jefferson and other patriots met to form intercolonial committees of correspondence. Williamsburg was the drafting site, too, of Mason's Virginia Declaration of Rights; of the May 15, 1776, Resolution for Independence which culminated in the July 4 Declaration; of the framing of a Virginia constitution later to be used as a prototype by many of the other states, and of Jefferson's Statute for Religious Freedom introduced in 1786.

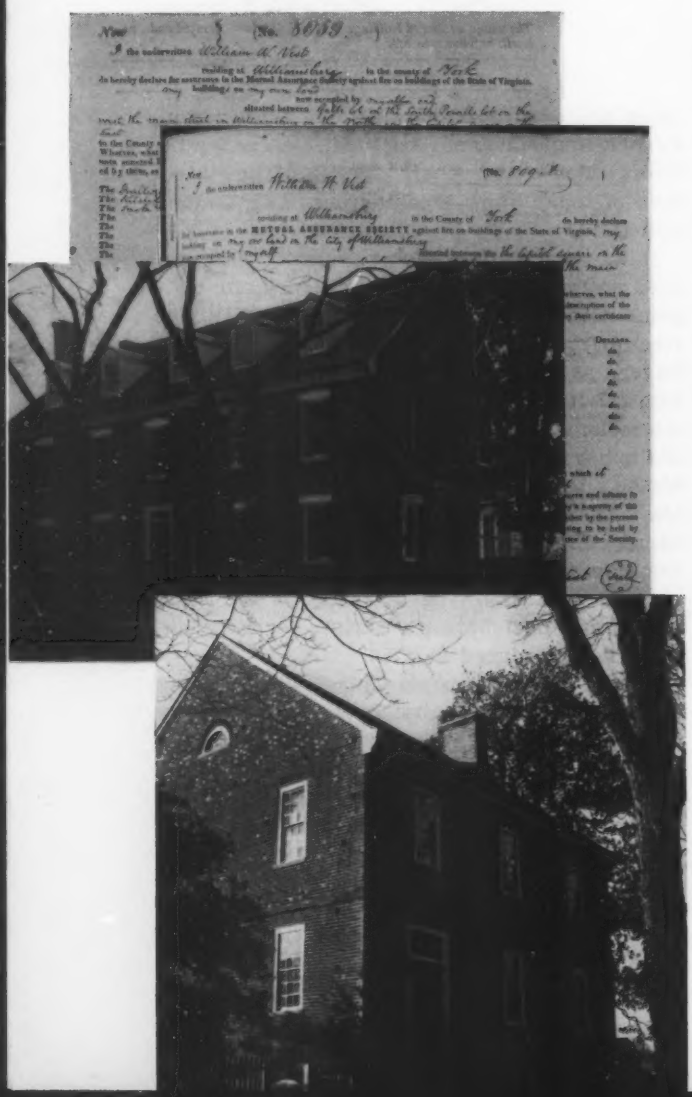
In those days the population of Williamsburg never exceeded 2,000, but in 1960 alone there were more than a million visitors to the city. It has become a veritable world Mecca where kings, presidents and political leaders of many nations mingle with the masses on hallowed ground of Western Democracy.

Home Town of American History

Restoration of Williamsburg has been described as "an almost unparalleled adventure in research." In fact, the search for "morsels of genuine history" is still going on. But Williamsburg today is a triumph of 35 years in archeological excavation, architectural study of comparable buildings here and abroad, and documentary research in such places as county records, private correspondence, early newspapers and official records of the Virginia Colony in Great Britain.

Mutual insurance produced some of the most unexpected and rewarding fruits of this extensive research in records preserved by the Mutual Assurance Society of Virginia from the late 18th and early 19th centuries. Chartered on December 22, 1794, the society is the oldest fire insurance company in the South and is active today with assets of more than $15 million.

All Declaration Photos Virginia State Library
All House Photos Colonial Williamsburg



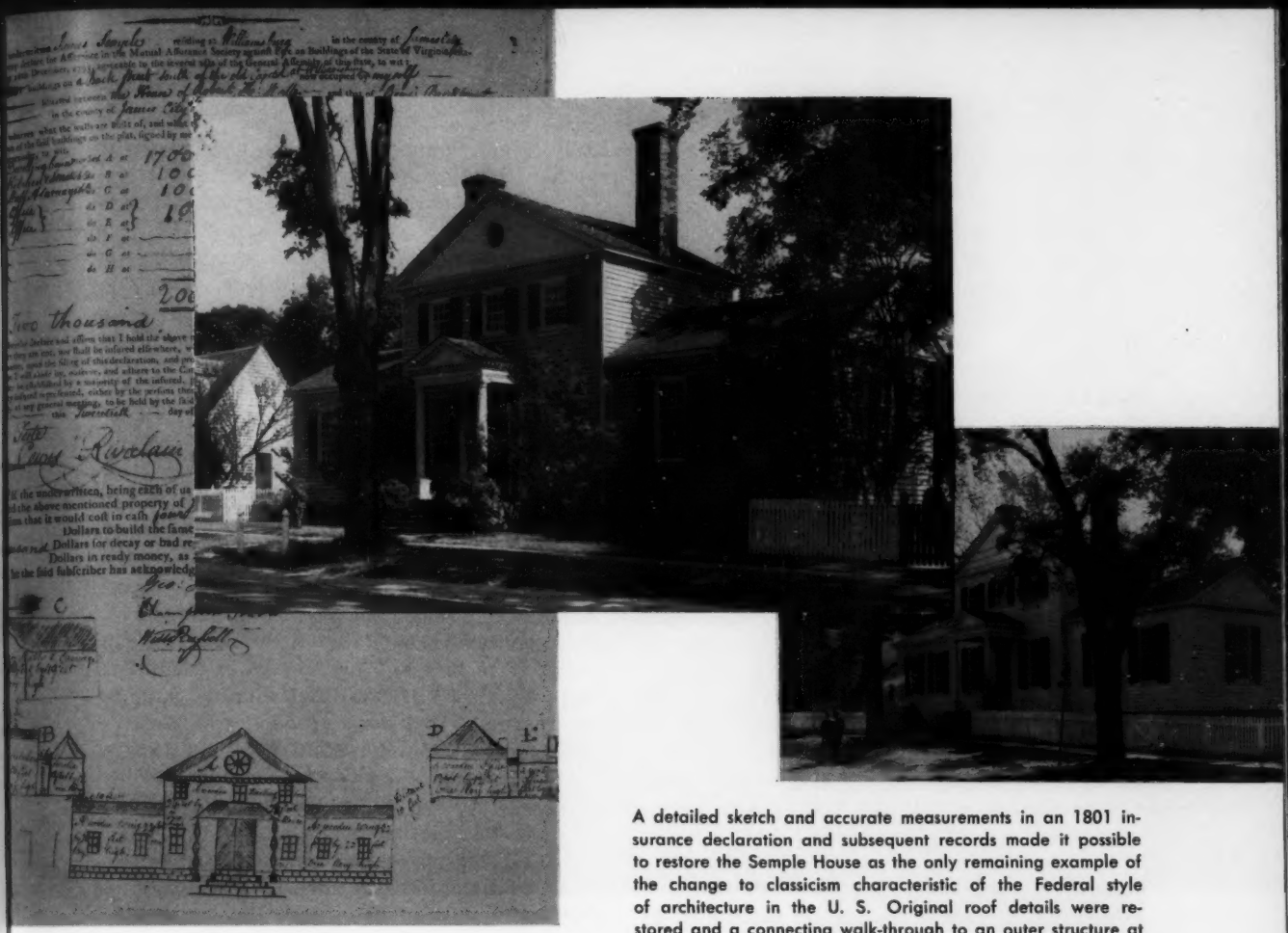
Fortunately for the restoration effort, as well as for the property owners, many buildings in the Williamsburg area were covered by several hundred new or re-evaluated policies issued by the Society from 1796 until the beginning of the Civil War. Documents appended to the policies and known as the "Form of the Declaration" yielded a treasury of details for the restoration. On this form, the owner listed his buildings, indicated their location, and placed an insurance valuation on them that by law could not exceed four-fifths of the actual value. For good measure in aiding restoration, the form also included a sworn statement by three other property holders confirming the owner's estimate of the value of his buildings and a sworn statement by the owner himself that he would abide by the rules of the Society.

At the bottom of the form a rough sketch indicated where the insured buildings stood on the property, gave the dimensions, named adjoining property holders, and sometimes provided other descriptive details. Later policies, for instance, added the distance of insured buildings from other wooden buildings.

Here, then, those responsible for the work of restoring Williamsburg had a veritable set of blueprints. The information helped establish the ownership not only of the insured properties but also of adjacent properties, which were often identified in order to fix the location of the insured buildings. It also was often possible to determine the number and location of small outbuildings, relatively impermanent structures without extensive foundations. Major buildings, which were still standing but which had been considerably altered over the years, could sometimes be restored to their original appearance with the help of dimensions and other details given in the insurance records.

In cases where major buildings had been completely destroyed, it was possible to determine the probable location of foundations, thereby simplifying the task of the archeologist. It was even possible in some cases to discover

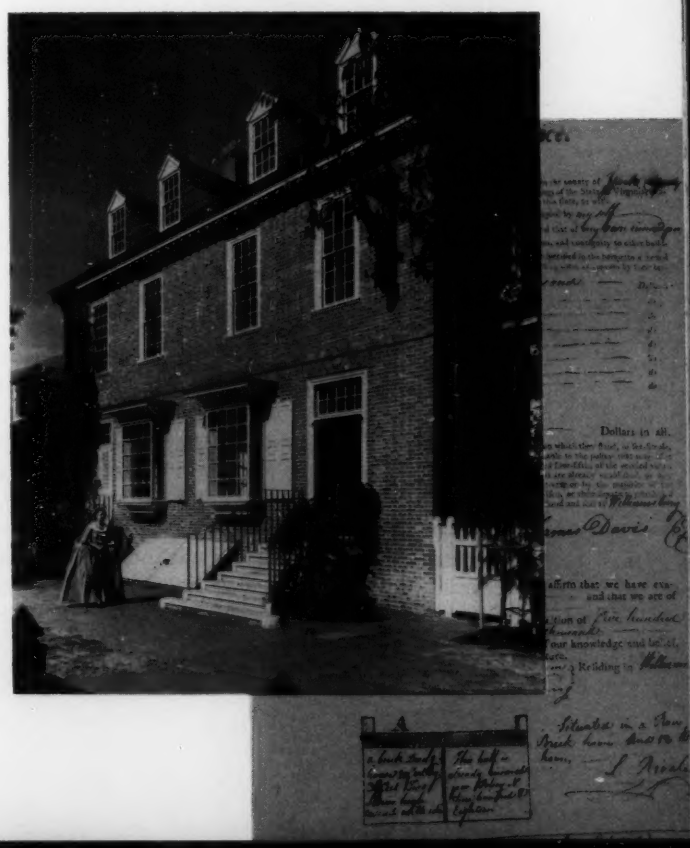
Palmer House, built in 1754 and headquarters for generals in the Civil War, was restored to its original state (below) by means of authentic details in two insurance declarations. The earliest declaration, made by owner Vest in 1834, established original dimensions of the house. A subsequent declaration by Vest in 1858 revealed an addition, as shown in the view above, which was removed in restoring the 18th-century appearance.



A detailed sketch and accurate measurements in an 1801 insurance declaration and subsequent records made it possible to restore the Semple House as the only remaining example of the change to classicism characteristic of the Federal style of architecture in the U. S. Original roof details were restored and a connecting walk-through to an outer structure at the left was eliminated on evidence in the insurance records.

details that made possible an accurate and authentic reconstruction.

Painstaking search was made for all possible information about buildings in the period to which Williamsburg was being restored—1699-1780—when it served as the capital of Virginia. Although the earliest of the insurance declarations were dated some 16 years after the end of this period, that fact did not lessen the value of the records. Many of the buildings described in the owners' declarations had not been materially altered since 1780 or earlier, nor had the ownership always been changed. Moreover, where 18th-century structures had been enlarged or otherwise modified at a subsequent time, successive insurance declarations often noted these changes and thereby established



John Carter's Store and Unicorn's Horn, an apothecary shop, were housed in the original of this building built in 1765 but destroyed by fire in 1859. It was reconstructed with the help of a complete set of old insurance records showing the form and exact dimensions, as well as the various occupancies over the years. Dr. James Carter had his Unicorn's Horn apothecary in the left section; a brother, John, kept his store at right.

for the architects what part of the building would have to be removed to achieve a restoration to the colonial period.

One example, especially notable among the many which could be cited, is the Semple House, a late 18th-century structure, which is Williamsburg's only remaining example of the change to classicism that characterized the Federal style of architecture in the U. S. It stands on Francis Street not far from the Capitol.

By 1797 or 1798 James Semple, a judge and a professor of law at the College of William and Mary, had acquired the house, and in 1801 he insured it and its four outbuildings.

When restoration of the Semple House began in 1932, the detailed sketch of the elevation on the original declaration of 1801 made possible the restoration of the roof line, which had been altered in 1900 after a fire destroyed part of the roof. Two subsequent policies established the approximate date of a rear addition to the central pavilion, which had not appeared on the 1806 policy but was recorded in 1823.

Restored Palmer House Has War History

A second historical restoration facilitated by the old insurance records is the Palmer House which served as the Civil War headquarters for Confederate Generals John Magruder and Joseph Johnston and later for Union General George B. McClellan. It is the last building on the south side of Duke of Gloucester Street before the Capitol. John Palmer, a lawyer and bursar of the College of William and Mary, had constructed this house about 1754 to replace one destroyed by fire. But the original size of the house later had been nearly doubled by a large addition, a vital consideration in doing an authentic restoration. The earliest recorded insurance declaration on the property, made by William W. Vest in 1834, specified a main house that measured 36 by 40 feet. Vest listed the same dimensions in later declarations, until in 1858 he noted a new addition 24 by 36 feet and raised the valuation of the main building from $4,000 to $7,000. In 1951 and 1952 Colonial Williamsburg removed Vest's 1858 addition, restoring the 18th-century appearance.

Colonial Williamsburg also has some 48 examples of major 18th-century structures, as well as many minor ones, which had been completely destroyed. Among those which have been reconstructed with the help of the old insurance records is the substantial two-story brick building that housed John Carter's Store and the Unicorn's Horn, an apothecary shop. Located next to the Raleigh Tavern, it burned in the same fire that consumed the original structure of the historic old inn in 1859.

This building had been constructed in 1765 for two brothers, John Carter, who operated a store, and Dr. James Carter, who kept the apothecary's shop with the colorful name of the Unicorn's Horn.

By 1796 John Carter's side of the building had passed into the possession of James Davis, a tailor, who took out one of the early Mutual Assurance Society policies in Williamsburg—policy number 118, dated April 19, 1796. This policy is, in fact, the first record of his ownership. By 1801 Davis owned the entire building, whereupon he took out a new policy to cover the other half of the building. It is his 1801 declaration that clearly shows the building to have been two full stories in height, an unusual form of shop construction in Williamsburg.

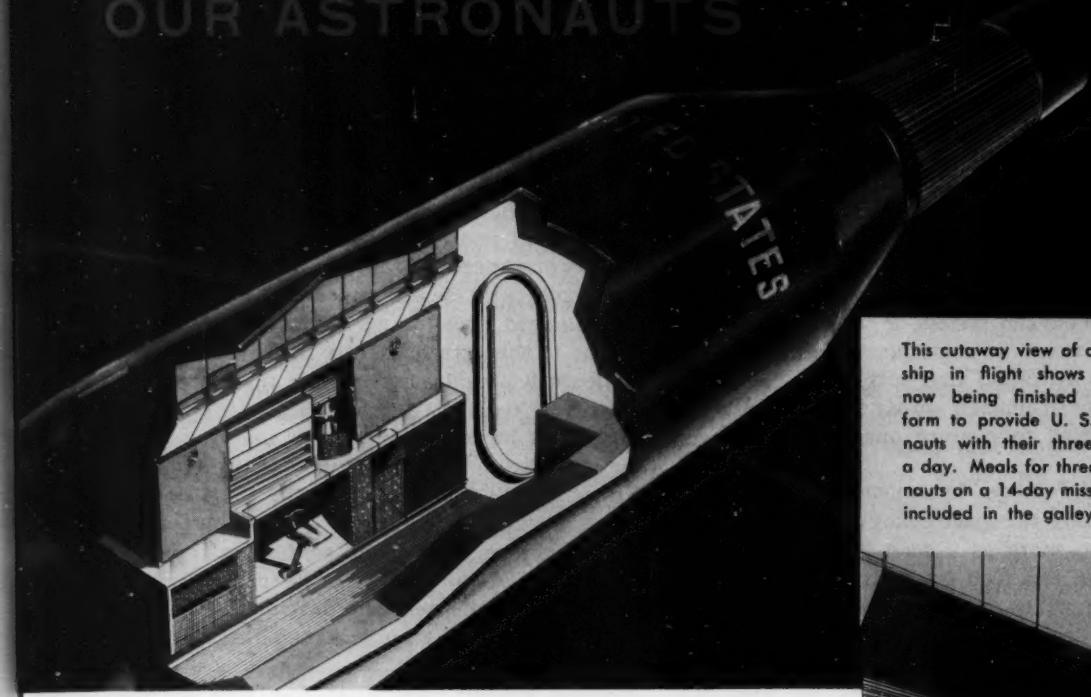
After 1801 there were eight subsequent insurance declarations on this building made by Davis and subsequent owners, the last being a declaration in 1853 by William W. Vest, who also owned the Palmer House described earlier. Vest's policy—and ownership—were still in effect in 1859, when the fire occurred.

Re-creation of Williamsburg as a broad panorama of early American history has been done at a cost of more than $71 million, but it could never have been achieved at any cost but for the "morsels of genuine history" which researchers were able to piece together from the old insurance records and other sources.

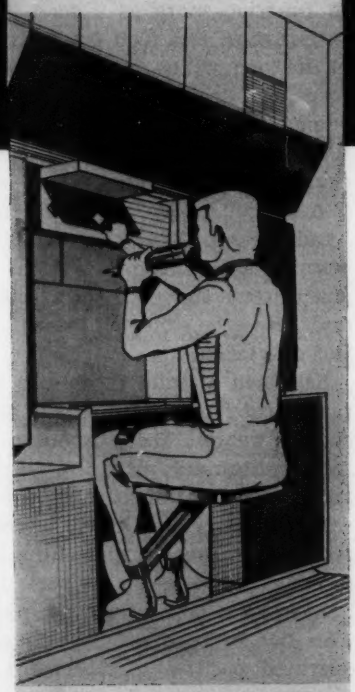
Nation's First History Is Enshrined Here

Colonial Williamsburg, in fact, has lineage with the very beginnings of American history. Nearby Jamestown, the first permanent English settlement in America (May, 1607), burned on several occasions. After the 1698 fire which leveled the Statehouse, Williamsburg became Virginia's capital and the center of colonial affairs in 1699. Thus visitors to the now restored Colonial Williamsburg can turn back the pages of our heritage to the opening chapters, rich in morsels of genuine history. ⊙

GASTRONOMIC THRILLS FOR OUR ASTRONAUTS



This cutaway view of a space ship in flight shows galley now being finished in test form to provide U. S. astronauts with their three meals a day. Meals for three astronauts on a 14-day mission are included in the galley plans.



Astronaut dining here has selected food from the galley's stock. Right hand is popping container into one electric-oven cavity. Left hand holds a mouthpiece which attaches to one end of the can and has a ratchet-squeezing device to force heated food into mouth. Man is anchored, won't float.

America's first astrokitchen will ensure "home cooking" for faraway spacemen.

SOMEWHERE OUT THERE IN SPACE on a journey many miles from the earth, America's first astronauts will enjoy the traditional breakfast of ham and eggs with less fuss and bother than it can be cooked and served back home.

If that seems like a culinary absurdity, consider that astronauts will need their customary three meals a day, with beverages, for days on end and maybe weeks.

The first kitchen, or "space galley," to test the feasibility of such a scheme is now nearing the ready-to-go stage at the Whirlpool Corporation, St. Joseph, Michigan, under contract by Wright Air Development Division, Air Research and Development Command, USAF. It is to be completed and delivered to the WADD by the end of April essentially as previewed here.

Stepping into the galley, the astronaut will be in an area approximately 10 feet long and 7½ feet in diameter within the forward section of a multistage rocket. There he will have at his fingertips a miniaturized, thermoelectrically fueled refrigerator and a freezer, a three-cavity oven and a built-in

2½-gallon water system with its own heater. Even before the astronaut tries a steak, the sight of familiar earthly kitchen accouterments out there at great distance and in strange surroundings is expected to do something for him psychologically.

Lack of gravity can even be mastered by the aero gourmet. Otherwise the weightless foodstuffs, cans, pots and pans, knives, forks and spoons would be floating around in mid-a r. An astronaut might be agile enough to dodge the flying crockery, but damage to flight instruments, the oxygen system or the capsule structure itself would be something else. And if the weightless astronaut had nothing to hold onto, he would push himself across the kitchen every time he tried to operate one of the gadgets.

Galley Will Feature 'Convenience' Foods

Accordingly, the space galley has been designed to function more as a food dispensing center rather than as a food preparation galley. Much of the food will be in preprocessed or dehydrated form and packaged in disposable containers resembling oversized toothpaste tubes. Other foods in the canned stage such as ham and eggs, curried chicken, Swiss steak, vegetables and miscellaneous solids will be stored within handy reach. This kitchen will even have the counterpart of the proverbial cookie jar, for snack items such as candy, nuts, cookies, cakes and bite-size sandwiches will be available to the spacemen.

Selection of solid foods and whatever preparation they may require will be a short-order cook's dream. The spaceman will place any food containers requiring heat in the space galley oven. Automatically, this heating device will warm the food to 170 degrees. Dehydrated foods could present something of a preparation problem, since water at zero gravity does not behave as it does under normal circumstances. This has been solved by designing a manually operated positive displacement pressure pump into an air-free water system. To operate the pump, which meters out a preselected amount of air-free cold water, the space crewman will pump the displacement handle with one hand while holding onto the support bar with the other. If hot water is needed, three pints of 170-degree water can be drawn every two hours.

Once his canned foods are prepared, the astronaut will place a mouthpiece on each container, then insert the container in a device resembling a squeeze-type potato masher. By squeezing the attachment, he can force the food out of the container and into his mouth. For the tubes of food, normal hand pressure will be sufficient without the help of the squeezing devices.

Dining—in fact, even swallowing—may challenge the epicurean finesse of an astronaut. Research by ARDC's Aerospace Medical Laboratory at Wright-Patterson Air Force Base has shown that man can swallow foods and liquids during brief periods of weightlessness, but scientists have little idea of what may happen during a prolonged stage at zero gravity.

But if the astronaut can swallow, the space galley will provide him with all the mechanical means of keeping from starving in a pantry of plenty. If he could manage the morning paper, he could enjoy it uninterrupted, since only one crewman will eat at a time while the other two must remain at their duty stations during an entire mission. First, the containers, tubes or other food items will be snapped into holders on a compartmented tray. The tray itself will be held down by clamps. Then the astronaut will strap himself into a seat to keep from floating around. Removing one tube or container at a time, he'll place the mouthpiece in his mouth, squeeze out the food, then replace it and grab another food item.

His wide range and variety of food during, say, a 14-day trip is indicated by the Sunday menus at the halfway stage of the mission: breakfast—orange juice (dehydrated), scrambled eggs (dehydrated), Canadian bacon (canned), bread and butter (frozen), milk (dehydrated), coffee (dehydrated); lunch—tomato soup (d), roast beef with mushroom gravy (c), buttered green peas (c), baked potato (c), bread and butter (f), fruit compote (d), coffee or tea (d); dinner—pineapple juice (d), chicken stew (c), steamed rice (d), buttered corn (c), bread and butter (f), brownies (packaged), cocoa or milk (d).

KP Chores Will Be Reduced to a Minimum

To the delight of every bachelorly man, the space kitchen has all but eliminated meal cleanup work. Mouthpieces will be washed with specially prepared "wash'n'dry" cloths. Dry and wet waste will be deposited in self-sealing disposal sections and sprayed with a bacteria-

retarding solution. When these minor KP chores are completed, the astronaut will return to his mission on the flight deck.

Pervading the galley at all times will be both the spirit and the principles of mutual insurance. Whirlpool Corporation itself is insured on its workmen's compensation program and some of its other risks by mutual property and casualty insurance companies. Loss prevention, that tenet of mutual insurance which is paramount in providing insurance protection at cost, is built right into the kitchen as a mandatory measure for minimizing failure and assuring the safety and comfort of the astronauts. For example, the hot-water tanks and the water-storage tanks have two complete systems. If one fails the other goes into operation. All are designed so any necessary service in flight will be simple and easy enough for the astronauts to effect. Space flight itself will be such a risk that every possible hazard has been reduced and every conceivable safeguard added, down to grab bars on all the cabinets and toe space under the counter. Finally, when the completed galley is delivered to Wright Air Development Division, it will be installed in a 30-foot double-walled capsule for extensive testing. Three men probably will live in the capsule for 14 days under simulated space flight conditions.

Just when fantasy and testing will end and space travel will begin may come sooner than imagined. When man does set foot on the moon, it is safe conjecture that he will have dined en route in this space galley or some replica.

Actual costs of that first round trip to the moon already have been computed in astronautical circles. Discussing the venture before the American Astronautical Society, officials of the Chance Vought Corporation's astronautics division came up with a cost estimate of $3,068,000,000 for the round trip of eight to ten days with allowance for a stop of one to three days on the moon's surface. Subsequent missions would be cheaper—only about $200 million a trip—since about three-fourths of the costs of the initial trip would be nonrecurring.

Much of the fantasy of travel to the moon and Mars is dispelled by the realism which has been achieved in the successful orbiting of satellites by the U. S. As of this writing, 15 of the 17 satellites in earth or solar orbits are American.

Space galley was patterned after this exact mock-up built to hairline dimensions and designed for maximum convenience and comfort yet capable of withstanding unearthly strains and forces. Squares painted on side of pulldown cabinet represent pockets in which tubes of dry food will be stored for crewmen.

Three Photos Whirlpool Corporation

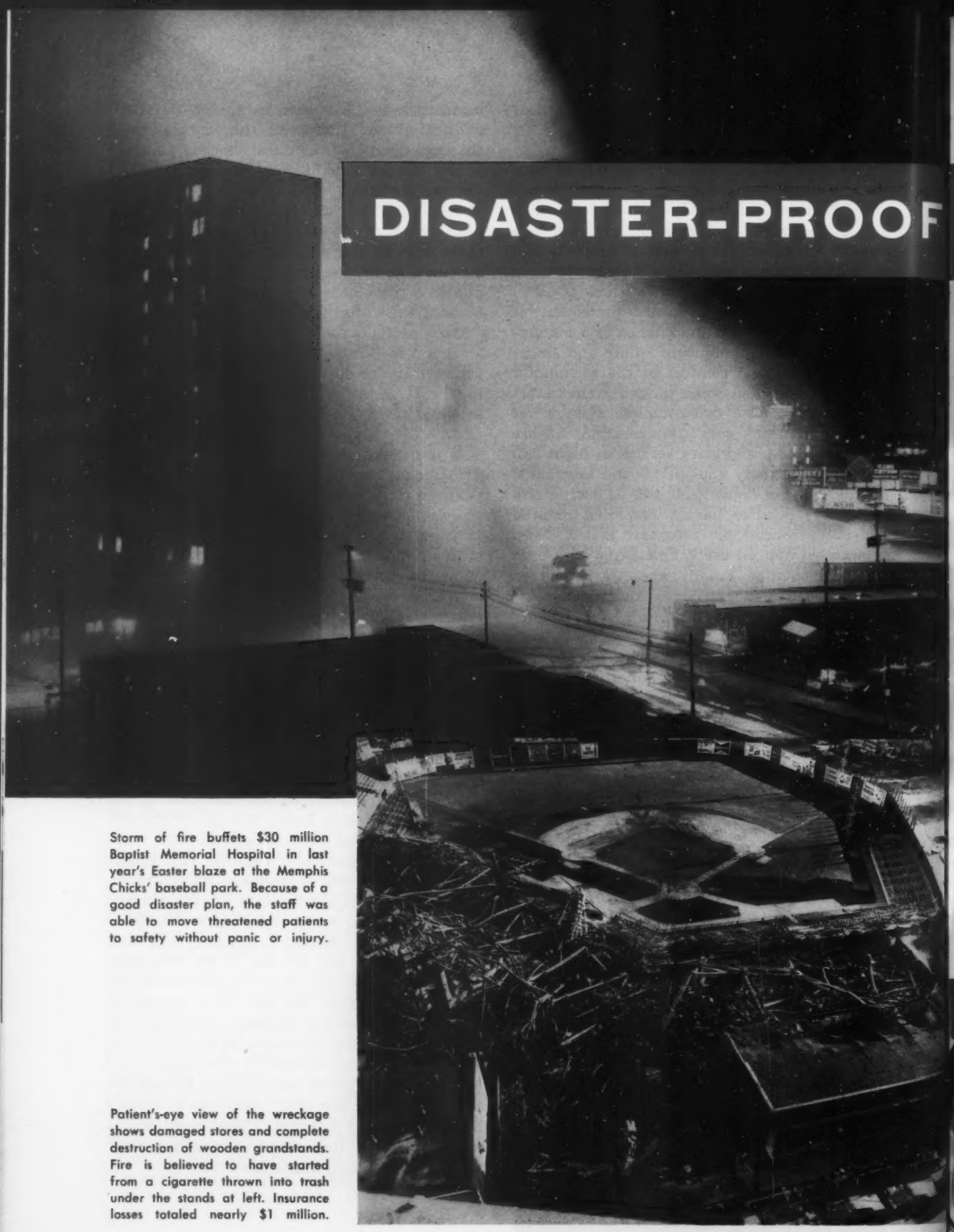
Man Is Destined to Depart This Globe

"After all," as Dr. Wernher Von Braun propounded recently before a meeting of insurance representatives, "why should we confine man to this globe? . . . (he) has been struggling more or less successfully to survive on this semihostile planet for about a million years. We have now learned to create an artificial environment permitting relatively comfortable living in any climate, under water, as well as in the stratosphere and in space. Finally, now, man has learned to live and multiply so proficiently that if he keeps it up another 500 years, . . . there will be standing room only on this planet."

Maybe a space galley that can sustain three astronauts on a trip to the moon or some other space objective is no more fantastic than tomorrow's automobile, considering that it has been 178 years since man's first free flight into the air. That was on November 20, 1783, when the aeronauts Marquis d'Arlandes and Pilatre de Rozier at the Bois de Boulogne, Paris, France, were raised about 500 feet into the air, burning straw in a grate hung underneath the Montgolfiere balloon. Mutual insurance, in a way, was in on that, too, for one of the interested and perspicacious spectators at that event was Benjamin Franklin. He was then serving as minister to France and had been one of the 1752 founders of mutual insurance in his homeland.

Franklin had an answer for the skeptics and doubters of new things aeronautical. In response to their scoffing question, "What good could a balloon be?", he retorted, "What good was a newborn baby?" He would be just as sagacious about the new-baby space kitchen. ⊙

DISASTER-PROOF



Storm of fire buffets $30 million Baptist Memorial Hospital in last year's Easter blaze at the Memphis Chicks' baseball park. Because of a good disaster plan, the staff was able to move threatened patients to safety without panic or injury.

Patient's-eye view of the wreckage shows damaged stores and complete destruction of wooden grandstands. Fire is believed to have started from a cigarette thrown into trash under the stands at left. Insurance losses totaled nearly $1 million.

HOSPITALS

Their archetypes, survivors of Memphis fire, teach lessons anew on this anniversary.

IT WAS EASTER SUNDAY night, one year ago, and many residents of Memphis were in church when services were interrupted with an emergency announcement: "A disastrous fire has broken out in the medical center area . . . all off-duty firemen please report."

Thus the news spread of a harrowing battle to protect the lives of 1,300 hospital patients threatened by one of the worst fires in the city's history. Before the fire was over, the entire community had reason to be grateful for the magnificent defenses, both human and physical, devised in advance and carefully practiced for just such an emergency.

Too young to understand how close tragedy came, a little lady named Janie reaches out to touch cracks in the sturdy windows that held against 1,000° heat. Double-paned, heat-resistant glass is credited with averting catastrophe at the hospital.

Baptist Memorial Hospital Photos

The five-alarm blaze had begun in Russwood Park, for 60 years the home of the Memphis Chicks baseball team and the scene that afternoon of an exhibition game. But the littered wooden stands were empty and locked for the night when visitors in the second-floor maternity ward of Memphis General Hospital, 35 feet away, saw the orange flames licking up the side of a small wooden tool shed under the northwest section of the grandstand.

A hospital maid turned in the first alarm at 7:28 p.m.; the first fire truck arrived three minutes later. Within 10 minutes the entire stand was involved and the fire began spreading to stores and offices along the southeast edge of the park, away from Memphis General. But a 20-mile wind sucked up pieces of red-hot debris as big as footballs and sent them smashing against the 12-story Madison East wing of Baptist Memorial Hospital, part of a $30 million complex ranking seventh in the nation in number of patients admitted.

"This was what we call a 'fire storm,'" said Memphis Fire Chief E. A. Hamilton. "Madison Avenue acted as a natural draft, pulling the flames out and up, like the funnel of a tornado, straight against the face of the hospital."

Inside the two hospitals, with tragedy only a windowpane away, the staffs quickly mobilized as the searing heat beat against the walls. Interns at Memphis General used small hose lines on blazing window sills as nurses evacu-

ated 24 mothers and 68 babies, 21 of them premature, from the exposed maternity ward. A human chain passed them along to nearby Frank T. Tobey Children's Hospital.

At Baptist Memorial, where peak temperatures reached 1,000 degrees, double-pane windows on floors 2 to 12 kept out the flames and almost certainly saved the hospital from severe damage. Single-pane plate glass windows in the lobby gave way after only 15 minutes, igniting the heavy draperies and spreading smoke as far up as the fifth floor.

But in that incredibly short 15 minutes, the hospital's disciplined staff had already moved 225 patients to safety from rooms along the exposed wall, without panic and without casualties. Critically ill patients were whisked down the elevators, beds and all, to an "intensive care" laboratory. When the central oxygen supply was turned off, emergency crews set up portable units credited with saving at least three lives. Classrooms, conference rooms and prayer rooms were stripped to make room for beds, and patients able to walk were led down stairways to the employees' cafeteria and served hot food.

They Came Without Being Called, to Help

Dozens more, including young children, were transferred to the unexposed main building and quickly reunited with distraught parents who heard the news at home and poured into the Medical Center looking for their own. Off-duty employees, not waiting to be called, also began arriving within three minutes to join the battle, slipping quickly through police lines by showing their disaster cards and reporting to prearranged emergency posts.

Together with the on-duty shift, they stripped down hot draperies, moved furniture out of the threatened lobby, put tarpaulins over nearby office files, rushed linens and medical supplies to handle the sudden shift of patients. Firemen and employees fought back the flames licking in the broken lobby windows and laid hose on every floor to prepare for the worst.

But the worst was not to come. All 651 double-pane windows cracked under the searing heat, then stubbornly stayed in place and held the probing flames at bay. After an hour of suspense, the fearful glow began to fade and a patient spread the word, ignoring hospital rules, with a yell that echoed down the long corridor: "She's going to hold, she's going to ride it out!" By 10 p.m., 2½ hours after the first alarm, firemen had brought the blaze under control, and by midnight 1,000 hospital employees and scores of volunteers were sweeping out the broken glass and readying scorched rooms to receive their displaced occupants. One hundred and forty-five new patients were admitted the next day as if nothing had happened.

In retrospect, the hospitals and the fire department did an exceptionally competent job of handling an emergency that could easily have become a catastrophe. Insurance investigators credit their success to the hospitals' own foresight, evident both in the construction of the buildings and in the remarkable efficiency displayed by hospital employees under emergency conditions.

Baptist Memorial's staff had been perfecting its disaster plan since 1956, including a day-long disaster drill in November of 1958. This was followed in July, 1959, with an intensive two-week training course in fire fighting and patient evacuation, conducted by the Memphis Fire Department. Every hospital employee took part in at least one of these training sessions. In addition, every on-duty employee had standing orders about where to go and what to do in event of a major disaster—a plan that saved precious minutes when every minute counted.

Encouragement of such hospital disaster plans, and active participation in devising them, is a long-standing policy of the nation's insurance industry. Insurance companies, in fact, have a strong stake in almost every move a hospital makes, from insuring the contractor who builds it to providing a major share of the funds for patient care under hospitalization and workmen's compensation insurance plans.

Insurers Aided With Emergency Planning

Baptist Memorial attributes many of the ideas incorporated in its disaster plan to insurance experts from the companies that underwrite its coverages, including Michigan Mutual Liability Company and Central Mutual Insurance Company. Insurance engineers regularly inspect the hospital's boiler rooms, workshops, kitchens and other areas subject to fire and explosion hazards. Since the Easter fire, an insurance expert also has helped the staff work out plans for an improved communication sys-

United Press International

St. Paul's Hospital in Dallas moved 254 patients to safety in less than 20 minutes when a five-alarm fire spread through the building. Only a few weeks earlier, the staff had worked out a disaster plan with the aid of mutual insurance experts.

tem based on battery-powered telephones for emergency use and short-wave radio sets for ambulances.

Another notable example of insurance help in improving hospital safety involved St. Paul's Hospital in Dallas, where a five-alarm fire that started in the attic forced evacuation of the entire building. Using a disaster plan worked out only a few weeks earlier with the aid of engineers from a mutual insurance company, the hospital's 60 staff members safely moved 254 patients into the nurses' home and other hospitals in less than 20 minutes. Reporting on the event later, St. Paul's safety officer said, "Companies carrying insurance and compensation on the hospital were most valuable in helping us to be fire-conscious (and) we have gone out of our way to comply as soon as possible with their recommendations. Certainly it has paid off in insurance rates, in actual building safety and fire resistance, and most important, in the saving of human lives."

No hospital can ever be completely "fireproof," as this blaze and the Memphis fire last Easter demonstrated. But by vigilant preventive measures and intelligent emergency training, hospital administrators and insurers alike are striving to make the modern hospital a "disaster-proof" haven for lives placed in its care. ⊙

PETS AREN'T COMPLAINING

They lead utopian lives in modern kennels now doing a thriving business

AMERICAN DOGS had one of their finest hours 52 years ago this month when Admiral Robert E. Peary, with the help of his four Eskimo dogs, reached the North Pole. Peary said after his conquest that without the hearty dogs his efforts would have failed.

Dogs today are still playing hero roles in opening up the arctic, as well as outer space, but for the most part our 26 million dog population rates attention, comforts and pampering as a mere matter of course.

Streamlined, insurance-protected boarding kennels with radiant heat, air conditioning and spacious, pastel-painted quarters are making a dog's life something to be desired. With such attractive sounding names as Silver Acres, Valley View Heights and Canine Country Club, kennels now offer their guests bathing, clipping, grooming and veterinarian service. Many will even pick up and deliver the pets.

Animal hospitals are also making strides toward better care, providing more complete facilities and services for their patients. Veterinarians make house calls and offer all-night emergency service. Their hospitals are equipped with such things as vaporizers to rid hospital air of virus and bacteria, and most, like kennels, provide boarding, trimming and bathing.

Keeping pets more comfortable and happy is costing Americans an estimated $156 million a year for powders, sprays and liquids alone to combat fleas and other pests. Newest of these "tranquilizers" is a pill developed by veterinary researchers of a pharmaceutical company that kills fleas, ticks, lice and other parasites through bloodstream action.

Animal boarding has become so common and popular that some 50,000 kennels are now vying for a share of the many dogs, cats and other household pets requiring care while their masters vacation this summer.

Willy Necker, dog trainer and boarding kennel owner of Wheeling, Illinois, says the peak season for most kennels will begin next month and continue through August. During that period, Necker said, his kennels will be filled to capacity. Most kennel owners happily find themselves in a similar situation, with reservations for pets being made in advance.

Kennels, like other places of business, have certain standards which they follow. This doesn't mean that they must be the last word in design and luxury to provide the necessary care for pets. According to Necker, whose 32-year-old building stands as neat and sturdy as the day it was built, kennels must offer their boarders ample room to run, provide protection for the animals against direct sunlight, either by shade trees surrounding the buildings or by awnings placed over outside runs, and have accommoda-

Quaker Oats Company

U. S. Navy

Few dogs have merited more attention than these three with Admiral Robert E. Peary on his North Pole conquest. Without their aid, he said, the historic mission would have failed.

tions for all breeds of pets, from large hunting dogs that prefer outside living to pampered house pets that are accustomed to more cozy quarters.

The majority of kennels are constructed on concrete slabs, with pens slightly graded for easy drainage while cleaning. Stalls can be lined with fire-resistive asbestos sheeting. Some have automatic sprinkler or fire-warning systems. These precautionary measures are particularly important for kennels located in areas where organized fire protection is not always readily available. In such cases an arsenal of fire extinguishers, conveniently placed throughout the building, is a must.

Necker's Wheeling kennels have an added protection against fires and prowlers. Although Necker's assistant, Frank Key, has living quarters on the second floor of the kennel building so that someone is continually on the grounds, a trained German shepherd patrols the outside area during evening hours.

Despite the many endeavors being made by kennelmen, they must still rely in great part on the help of animal owners. Like hotels, kennels have a few house rules which must be

Kennels are becoming as expensive as they are expansive. Well-lighted quarters of steel and concrete provide pleasant, easily-cleaned pet facilities.

→

Well-trained German shepherd earns his keep by patrolling outside kennel at nighttime. Most kennels have someone on the premises 24 hours a day.

followed. Some require that animals be inoculated against distemper before acceptance. One of the biggest headaches encountered by kennel operators is the late night arrival or departure of a boarder. A barking guest arriving late is as welcome among the other animals as a 4 a.m. trumpet player in a quiet apartment house.

Boarding prices vary from kennel to kennel, but are usually based upon the animal's size. For example, dogs of 50 to 80 pounds are boarded for an average of $1.50 per day. Larger—and hungrier—dogs, such as Great Danes, bring $2 and smaller animals $1. All types of pet foods are usually available, and young or underweight animals will receive special diets. Here again the kennels need the advice of pet owners to see that meal routines are not broken during the boarding period.

In addition to offering their guests a home away from home, kennels also afford the pet owners peace of mind through insurance for the buildings and their animal inhabitants. Fire and extended coverage, public liability, business interruption and workmen's compensation insurance are some of the many coverages available. Veterinarians can also be protected against damage suits by professional liability insurance. This coverage came in handy recently for one veterinarian. The owner of an expensive show horse sued after his animal was injured while under the vet's care. He collected $1,760.

Animals can be insured for replacement value through policies purchased by either their owners, kennel operators or veterinarians. This type of underwriting can at times be rather trying. A mutual insurance company, for instance, issued a comprehensive personal liability policy, which includes pets, to a Florida man who had just purchased a baby alligator—just six inches long. In no time the "pet" grew to full size and the claim possibilities soared.

There are other insurance policies which protect boarded animals against death or destruction resulting from fire and lightning, collapse of buildings, flood, accidental collision of vehicles, accidental shooting, poisoning, attack by another animal, burglary and theft.

Insurance agents establish a dog's worth by totaling initial cost, stud value and cost of training. Sentimental value is not a factor. If a pet is to be insured for a large sum, say $5,000, the owner and his neighbors, as well as the pet, are checked out. If a dog has a reputation for being a neighborhood nuisance, chances are the policy will have a death-by-poisoning exclusion.

With all of these updated insurance coverages, luxurious boarding facilities and modern hospital services, pets this year have reached a new high in living standards.

Even mongrels have their day. In New York recently the Children's Aid Society held a "Common Dog Show," judged by Dr. Samuel Milbank of the Westminster Kennel Club. Ribbons were presented to the dogs with the biggest ears, best personality, most affection and shortest tail. Milbank said he saw little difference between the pedigreed pups and those of unknown ancestry—except that the "lowbrows" had better manners. ⊙

Quaker Oats Company

Kennel owners each year look forward to summer vacation season when millions of pets require boarding. Kennels often ask that reservations be made in advance during these peak months. Two youngsters here give their boxer friend last minute words of good-by.

FROM OUR ANNALS

Civil War Centennial—1861-1865

FOR US, THE LIVING, Abraham Lincoln forespoke the spirit for our Civil War Centennial commemorations long before he could foresee what the outcome of the war itself was to be.

> "We are not enemies, but friends. We must not be enemies. . . . The mystic chords of memory . . . will yet swell the chorus of the Union, when again touched, as they surely will be, by the better angels of our nature."

That prophecy was uttered in Lincoln's inaugural address, March 4, 1861, more than a month before the war actually started with the Confederate bombardment of Fort Sumter on April 12.

Intermingled in the "chorus of the Union" being swelled by the Centennial exercises are the unmistakable overtones of insurance. Defense of values, as they saw them, motivated both the North and South. Ever since, they have fought side by side for an enduring nation and a lasting peace. And in the Centennial we aspire to a new respect for and a higher evaluation of the bravery, sacrifice and idealism which are the essence of American character.

Insurance paid uncountable sums on claims from Civil War losses, although the total of those losses could not have been foreset or underwritten. Afterward the estimated cost of the war to the Union was put at $6.1 million and to the Confederacy $3 million.

It was the Confederacy, however, and one of the Confederacy's cruisers—the *Alabama*—which made insurance history. Today in our National Archives the largest amount of insurance records preserved from the Civil War are in the *Alabama* claims.

Built in Liverpool, England, 1861-62, the *Alabama* is acknowledged to be the most famous of the Confederate ships purchased and built as the war progressed. Theretofore a Confederate Navy did not exist, except for those officers who had left the U. S. Navy. But by February, 1862, 47 vessels were in service, 14 under construction and others planned.

Limited though it was, naval strength of the Confederacy was used with telling effect in attempts to break the blockade, in defense of rivers and sounds and in extensive preying on unarmed Northern commerce. Before being put out of action, the *Alabama* alone took almost 70 prizes.

In the settlement of the *Alabama* claims, damage to U.S. shipping was put at more than $6 million. The claims were against Great Britain, where the *Alabama* and the other depredatory ships had been built. Records in the National Archives contain many claims made by insurance companies, with supporting evidence in names of vessels insured.

Some of the Confederate ships and cargoes were captured, and here again insurance had a role. In the National Archives are policies taken out by the U. S. Marshal for the Eastern District of Pennsylvania to cover captured vessels and cargoes brought into port for adjudication.

Then, as now, the government also depended upon the insurance industry for revenue and financial support in the form of taxes and fees. From 1861 to 1865 it cost the Federal government nearly $2 million a day to wage the war. In the National Archives records of the Bureau of Internal Revenue are license books that include the names of insurance company representatives who, as claims agents, paid annual licenses of $10 each under a wartime revenue law in effect from 1862 to 1873. There are also National Archives volumes that record duties of three per cent imposed by the same law and paid by insurance companies on all dividends declared and all amounts added to their surplus and contingent funds.

By today's appraisal, as pointed out by the Centennial Commission, what was lost was lost by all of us; what was finally gained was gained by all of us. Losses, gains and experience—they add up to a common national possession worthy of being insured with our patriotism and loyalty for all time to come. ⊙

State Rankings According to Percentage of Population Change, 1950-60

U. S. Average: 18.5 Per Cent Increase

	Per Cent
Florida	78.7
Nevada	78.2
Alaska	75.8
Arizona	73.7
California	48.5
Delaware	40.3
New Mexico	39.6
Colorado	32.4
Maryland	32.3
Utah	29.3
Hawaii	26.6
Connecticut	26.3
New Jersey	25.5
Texas	24.2
Michigan	22.8
Ohio	22.1
Louisiana	21.4
Washington	19.9
Virginia	19.5
Indiana	18.5
Oregon	16.3
Illinois	15.7
Wisconsin	15.1
Georgia	14.5
Minnesota	14.5
Kansas	14.3
Montana	14.2
New Hampshire	13.8
Wyoming	13.6
Idaho	13.3
New York	13.2
South Carolina	12.5
North Carolina	12.2
Massachusetts	9.8
Missouri	9.2
Rhode Island	8.5
Tennessee	8.4
Pennsylvania	7.8
Alabama	6.7
Nebraska	6.5
Maine	6.1
Iowa	5.2
South Dakota	4.3
Oklahoma	4.3
Vermont	3.2
Kentucky	3.2
North Dakota	2.1
Mississippi	.1
Arkansas	−6.5
West Virginia	−7.2

Source: Final Population Counts, 1960 Census of Population, Bureau of the Census, U. S. Department of Commerce.

U S A — 19

Our proliferating population, now up 18.5 per cent, sets new peaks for insurance services.

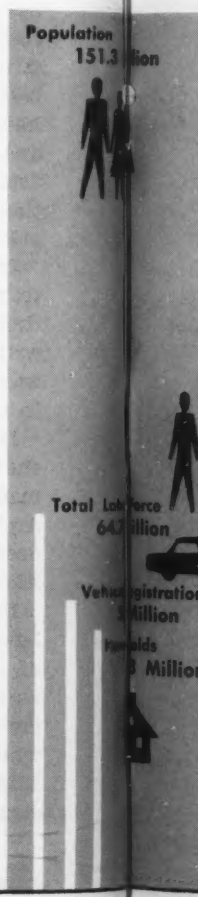
FOR THE DOOM-MINDED, fears of overpopulation and a plundered planet are conjured up by the 1960 census showing 179.3 million people in the U. S. But people are still a major resource of our economy, and the historical solution to expanding population under the American system is to increase production of goods and services rather than to curb the number of consumers. More people, more jobs, more homes, more automobiles and all the added assets of our growing population are in turn assured full protection for the value of life and property under the American system of life, property and casualty insurance.

Our rising birth rate and greater longevity are expected to boost U. S. population to about 225 million by 1975. This increase will be reflected directly in an expanding role for life insurance and health and accident coverages, as well as for annuities and pension programs for our senior citizens.

Rising vehicle registrations will create needs for additional motorists' public liability protection and other forms of auto insurance. And Department of Labor estimates of the coming growth in the total labor force portend rapid rises in workmen's compensation insurance on the industrial front.

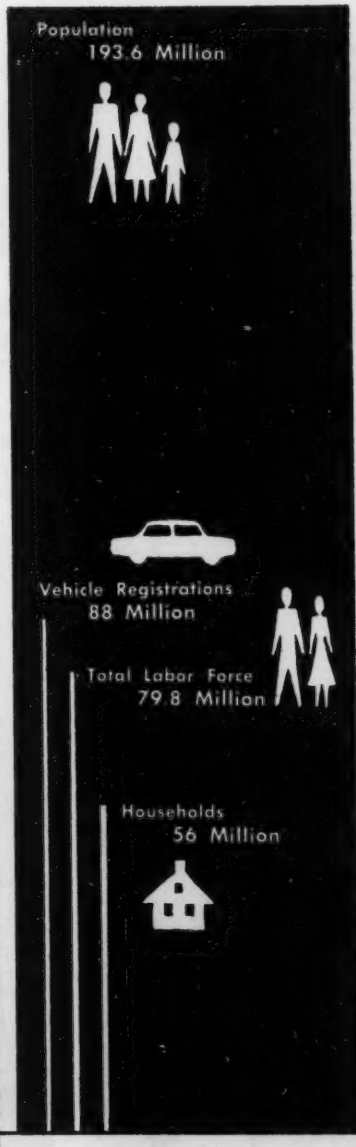
Furthermore, decided shifts in population centers are predicted for the next 15 years. Gains by individual states may not follow precisely the pattern indicated by the 1950-60 table printed here, but the general drift westward to Pacific Coast and Rocky Mountain states is well established and will probably continue through the 1970s. Mutual insurance, which began in New England and the Middle Atlantic states, has anticipated the continuing population explosion by extending its many services westward.

Its underwriting prospects in the New America now taking shape will be governed by the emergence of a population that is not only growing, but gaining better education and becoming both older and wealthier. Workaday insurance programs will be augmented in future years by policies designed for people with more leisure, many of them living on a standard that will include two cars and two homes per family. ⊙



50-1960-1965-1975

Increase in Life and Property to Be Protected



Sources: U. S. Bureau of the Census, Bureau of Public Roads, Department of Labor, National Industrial Conference Board.

HIPPO-SIZED 'PREFABS'

Mammoth structures now go up faster and more economically with preformed units.

PREFABRICATION, a term that acquired a slightly tarnished reputation in the early post-war era, is being rehabilitated in a big way by the U. S. construction industry.

Some of the nation's most imposing structures are being erected with remarkable speed by contractors using prefabricated panels, beams, wall sections and even entire floors. Enthusiasts say prefab techniques cut labor and material costs and reduce work injuries—all of which mean lower building costs at a time when the construction industry sorely needs a boost.

One of the more spectacular techniques is called "lift-slab" construction, where all the floors of a multistory concrete building are poured on the ground like a stack of gigantic waffles, then lifted into place by powerful hydraulic jacks. This allows concrete workers, plumbers, electricians and other construction crews to do their work at ground level instead of on hazardous scaffolds high in the air. It also means that thousands of tons of concrete, steel and other materials don't have to be hoisted piecemeal to upper floors.

Equally important from a safety standpoint is the elimination of heavy wooden forms that have to be built and then dismantled floor by floor. Pulling down these forms from the underside of a poured concrete floor is a job that frequently results in cuts, bruises, sprains and even disastrous falls.

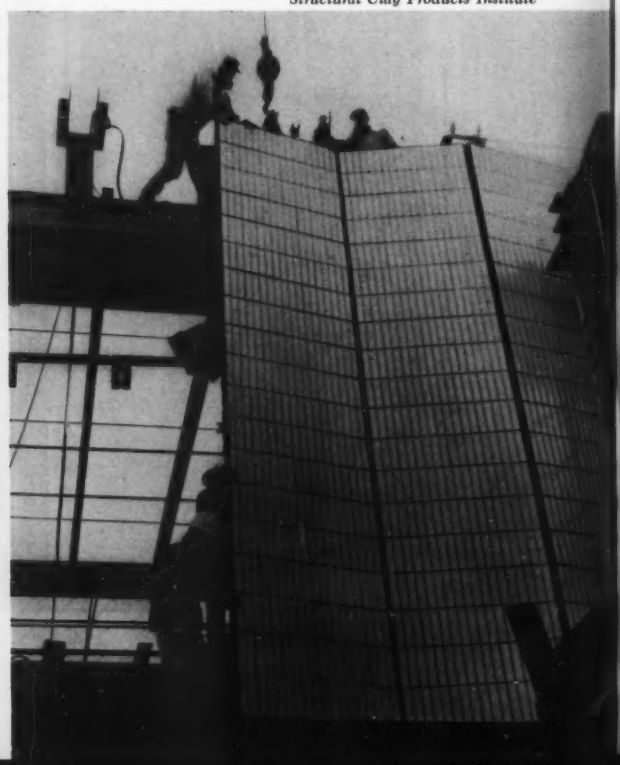
Two 15-story apartment buildings just com-

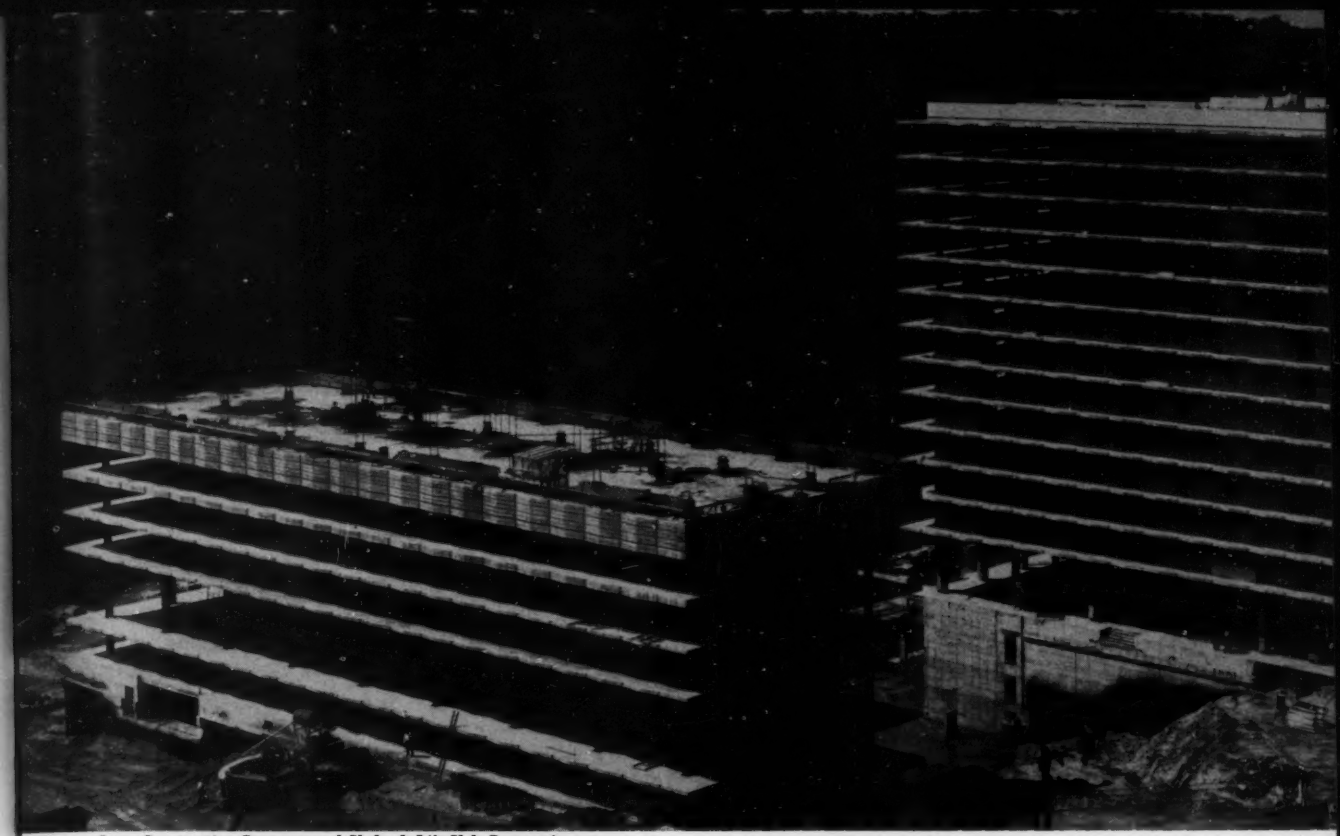
Worsham Construction Company poured these 20 by 17½ foot wall sections in a single stack, with a chemical parting compound between them to prevent sticking. Lift rings are built in.

White Motor Company

Prefabricated brick panels, new idea in masonry, are hoisted into place on a Chicago clothing store and fastened to steel supports. Mutual insurance covered workmen who put them up.

Structural Clay Products Institute





Long Construction Company and Skyhook Lift Slab Corporation

All 15 floors of these Ann Arbor apartment buildings were poured on the ground, raised into place by hydraulic jacks. Top eight floors of building at left are still to be lifted.

pleted in Ann Arbor, Michigan, illustrate lift-slab's possibilities. The JOURNAL asked the contractor, Long Construction Company of Kansas City, to compare his experience there with his record on a similar apartment building erected by conventional methods in Kansas City.

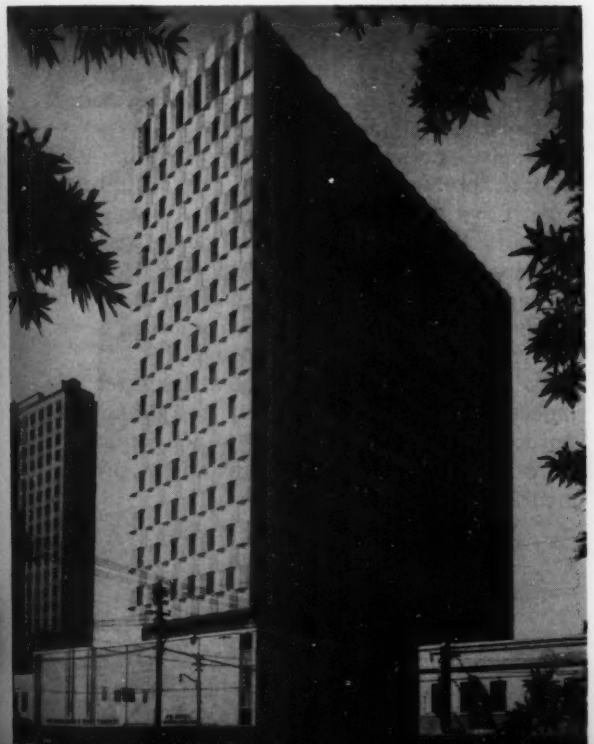
Over a 20-month period, the conventional job required 153,360 man-hours of work time, with 226 man-days lost because of on-the-job injuries. These accidents cost the contractor and his insurer $25,562. By comparison, the lift-slab job required only 101,017 man-hours and resulted in only 31 days of lost time because of accidents. Total accident cost was $1,967. The contrast is even greater than these figures indicate, since the Ann Arbor job involved two complete buildings, each slightly larger than the single conventional building in Kansas City.

"This comparison is consistent with all our experience that lift-slab, by the very nature of the slab-forming location at ground level, is dramatically safer than floor to floor forms," says T. J. Walsh, Long's safety director.

Many of the same advantages are gained with a second prefab technique called "tilt-up" construction, where large sections of concrete wall

Checkerboard facade of Wachovia Bank & Trust Co., Charlotte, North Carolina, is formed by precast concrete panels. They can be ordered in almost any size, shape or color pattern.

Portland Cement Association



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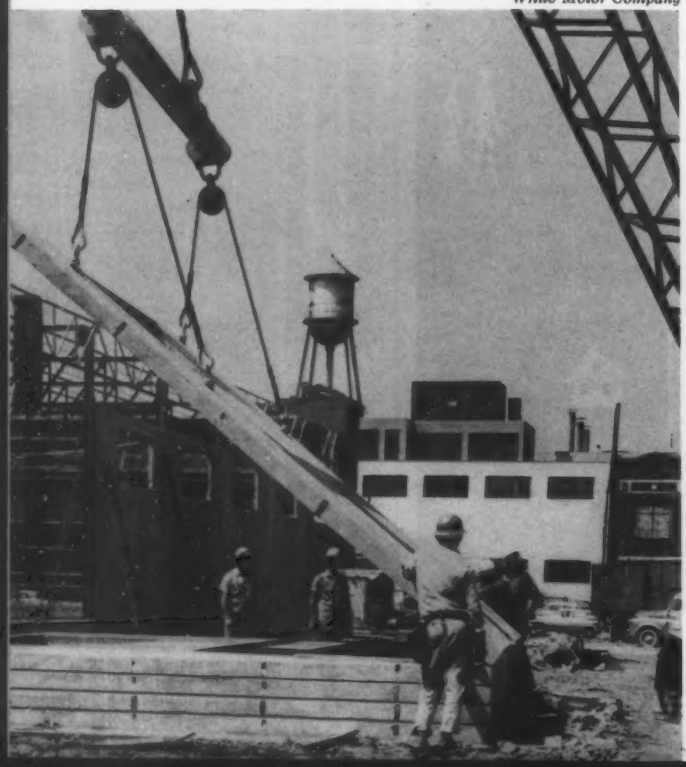

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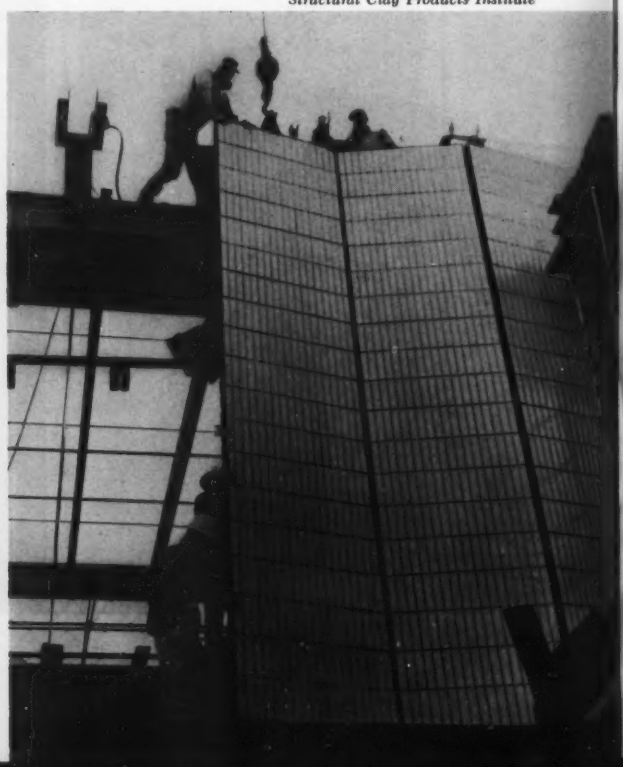

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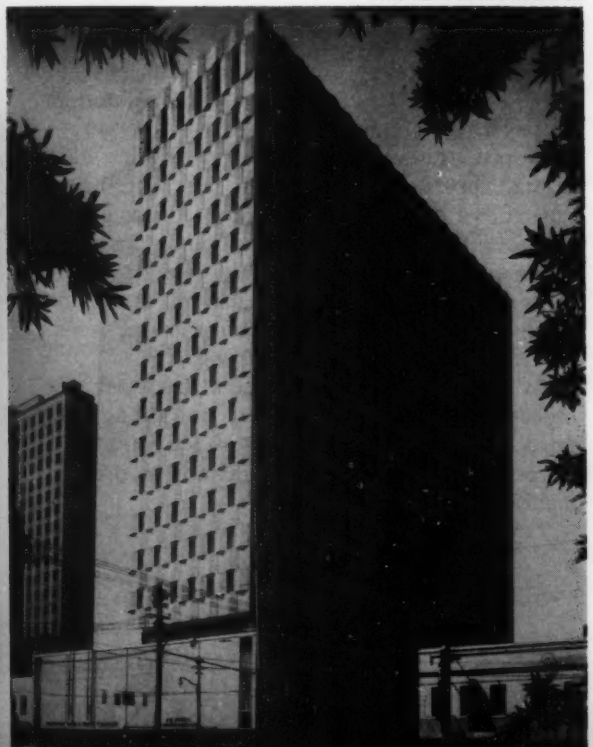

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also are poured flat on the ground at the job site and then tilted upright into position with the aid of a crane. Worsham Construction Company of Denver is using this method in erecting new sales and service quarters for White Motor Company in Dallas, Boston, Cincinnati, Jacksonville, Denver, Louisville and San Francisco.

Another new idea to speed wall erection is prefabricated brick, put together in panels four feet wide and one story high—or in any other dimensions specified by the architect.

Developers of the new panel, Structural Clay Products Research Foundation, claim the 2½-inch thick, steel-reinforced wall will withstand wind stress as well as a conventional brick wall of 4, 8 or even 12 inches thick, depending on its height. First large-scale use of the panels was in a Chicago clothing store a few months ago, where a saw-tooth wall of prefabricated brick was hung onto a steel skeleton to form a 19-foot-high facade. The architects reported that it would have required 16 inches of conventional brick masonry at the point of greatest stress to provide adequate wind resistance.

In office buildings, stores, apartments and other high-rise structures, similar panels of precast concrete, wood, plastic, glass, steel, aluminum and copper are being widely used to form nonweight-bearing walls that can be erected in large sections at a considerable saving in construction time and labor costs.

Yet another major trend toward prefabrication involves the use of prestressed concrete sills, columns and beams, some of them more than 100 feet long and weighing 30 to 50 tons. Crest Concrete Systems, Inc., of Lemont, Illinois, reports the price generally runs 10 to 20 per cent less than poured-in-place concrete, particularly on long spans. Contractor Jack Telander used large T-shaped beams of this type, placed side by side, to form a self-supporting ceiling and roof deck for a new junior high school in Elmhurst, Illinois. It took only five men to erect the columns, sills and roofs.

Roof deck of Elmhurst Junior High School in suburban Chicago is formed by prestressed concrete beams 65 to 110 feet long. For ceilings, the school simply painted the underside.

Crest Concrete Systems, Inc.

This reduction in human labor automatically reduces on-the-job exposures to hazards that could cause accidents. However, insurance engineers warn that the hoisting of heavy panels and beams also introduces some new hazards not found in conventional bricklaying or concrete pouring.

"So long as everything goes right, the use of prefabricated materials and mechanical hoists obviously will result in fewer injuries and fewer workmen's compensation claims," one engineer explained. "But when a mishap does occur, it's likely to be a serious one."

Prefabrication Turns Rates Topsy-Turvy

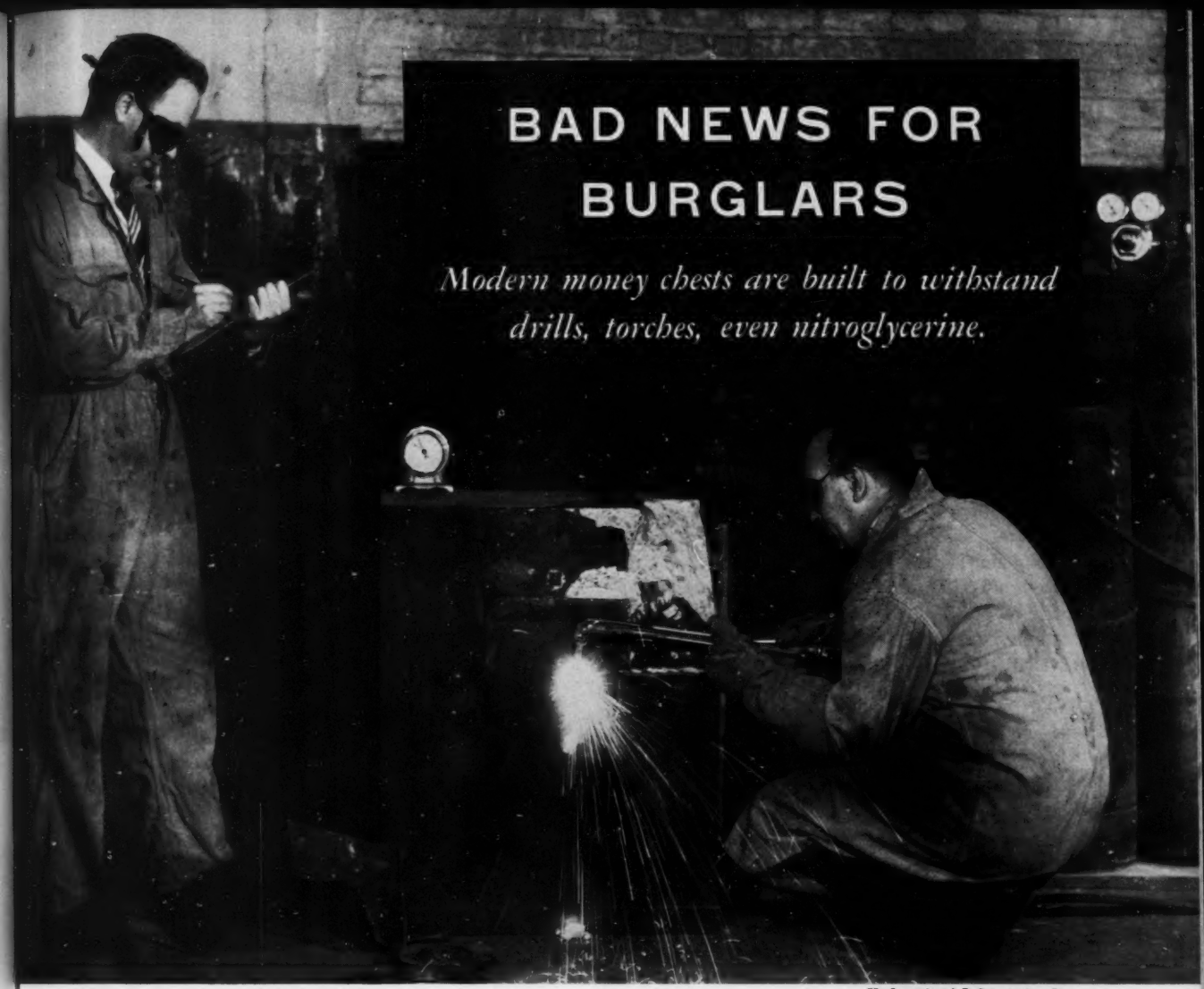
Paradoxically, even techniques that are demonstrably safer can still play hob with an insurance company's loss ratio—the balance sheet on premiums collected and claims paid. As one mutual company's underwriter put it, "Workmen's compensation premiums are based on the contractor's payroll—this being taken as a fair measure of his employees' exposure to work hazards. But prefabrication greatly reduces the payroll by increasing the amount of work one man can do. The net result is that we're getting fewer injury claims per job—but we're also collecting far fewer premium dollars to pay those claims."

Despite these problems, the overriding fact is that prefabrication in the long run offers good news for nearly everybody: A whole new industry that will provide far more jobs than it destroys; cheaper building costs for the nation's expanding economy; lower insurance premiums for cost-conscious contractors; fewer injuries for construction workers.

To the extent that it promotes the latter two objectives, prefabrication will be aiding the purposes for which mutual insurance companies were founded: To prevent losses and to provide insurance protection at cost. ⊙

BAD NEWS FOR BURGLARS

Modern money chests are built to withstand drills, torches, even nitroglycerine.



Underwriters' Laboratories, Inc.

James Middleton, expert safecracker and a senior project engineer for Underwriters' Laboratories, attacks new safes with latest burglar tools to probe for weak spots. UL approval means large discounts on user's safe-burglary insurance policies.

CENTURIES AGO, the Emperor of Annam discouraged thieves by stowing his treasure in a hollow teakwood log and casting it into a pool full of hungry crocodiles.

Today's security-conscious businessman relies on even more ingenious strongboxes devised by the nation's safe and vault manufacturers. Largely unknown to the layman, these companies are engaged—along with insurance companies and law enforcement agencies—in the toughest battle against burglars since the Capone era. Supermarkets, groceries, laundries and other retail shops bear the brunt of the losses, which now total more than $127 million a year in cash and other valuables. Much of this loot is being taken from safes and money chests mistakenly believed to be foolproof. Actually, many of them are as out-of-date as a crocodile pool.

"Since World War II we've had to keep fighting constantly to stay ahead of the burglars in technology," says H. G. Berean,

manager of Diebold, Incorporated's Chicago office. "The biggest problem is the availability of so many powerful new tools and the spread of human skill in using them."

Safecrackers also get considerable help from their victims. Some businessmen forget to change the safe combination from the standard factory setting. Others write it down and leave the card lying in a desk drawer or file it thoughtfully under "S" for "safe." One highly successful burglar who has since gone straight told police that he never forced open a safe in his life. He relied entirely on finding the combination somewhere on the premises. He invariably left some of the money and relocked the safe, thereby casting suspicion on the victim's own employees.

Even more numerous are the business firms that persist in using fire record safes to hold their cash receipts, apparently under the illusion that anything with a combination lock on it is a good place to put money. In actuality, those massive-looking record safes are mostly big chunks of insulation covered by a thin plate of steel. They are highly recommended to protect valuable records against fire, but they never were intended to provide more than a token amount of protection against forcible entry.

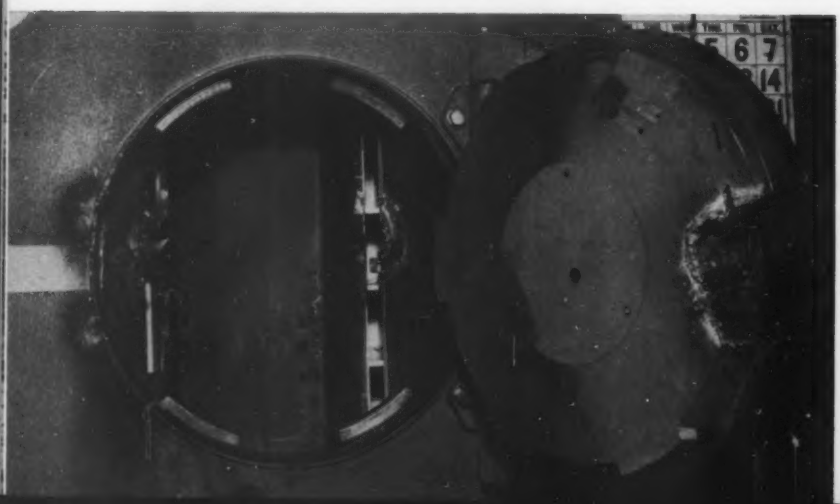
Overnight protection of cash and other concentrated valuables is a job for a round-door money chest. The best of them, developed only in the past two years, are so tough that their widespread use would force safecrackers to take up more lucrative pursuits — perhaps even honest labor.

Evolution of the modern money chest began about 1850 with the invention of the combination lock. This put an end to lock-picking, but burglars soon learned how to knock off the combination dial and drive the spindle through with a steel punch. When improved locks and automatic relocking devices thwarted this method, safecrackers turned to explosives, the oxyacetylene torch and the electric drill. One recent refinement of the latter is an electromagnetic base that makes the drill cling to a metal safe door as if welded there. Equipped with carbide-tip bits, this high-speed drill bores into steel as a wood screw into soft pine.

Safemakers in turn have countered these new crime weapons with improved designs. Heavy manganese steel helped put the nitro, or "soup," yegg out of business, as did also the extreme hazards of using such a tricky tool. The last time nitroglycerine was used in New York City, for example, was about 25 years ago when John "Blubber" Shean tried to blast open a factory safe and blew himself through the front door, breaking his arm.

Mosler Safe Company and Diebold, Incorporated, the two leading safe manufacturers, have also come up with drill defenses which one safe company expert calls "the most significant improvement in burglary protection in 40 years." It's an incredibly hard steel alloy which Diebold calls "Infusite" and Mosler calls "Relsom" (that's Mosler spelled backwards). Inserted in a safe door as a saucer-shaped inlay or in the form of imbedded steel pins, this flinty steel will crack even a carbon-tip drill in a matter

Torch burglars took $35,000 from a supermarket in Gary, Indiana, by burning through the door of this massive money chest in 1956. Newer chests have an inlay of copper to disperse heat and make such attacks much more difficult. Safemakers also change placement of locking bolts to keep burglars guessing.



Too many business firms still use fire record safes to hold money, a practice not recommended. Burglars have little trouble in cutting their thin steel casings and soft insulation.

of seconds. Main defense against torches is a half-inch inlay of copper, which disperses heat so fast that a torch can't cut through.

An additional safeguard is the round, screw-type door found on virtually all money chests. It closes, then swivels to engage heavy steel lugs that hold it shut. It fits so tightly that a single human hair inserted in the door jamb will prevent the door from turning. Since the bolts and lugs are all inside where a burglar can't get at them, he can burn off the hinges, handle and combination without loosening the door in the slightest.

Even with all these ingenious devices built into today's money chests, their manufacturers cautiously refuse to call them "burglarproof." As Frank Mattes, head of Mosler's Protection Advisory Bureau, puts it: "Given time and the proper tools and know-how, a clever man can open just about anything."

Instead of trying for complete impregnability, safe companies strive to complicate the yeggman's job and lengthen his working time so much that he will shun the well-built money containers for fear of getting caught in the act.

Safes and money chests are tested and rated for their burglar-resistive qualities by Underwriters' Laboratories, an independent testing agency originally started by insurance companies. Some of the most skilled safecrackers in the nation work for the lab's Burglary Protection Department at Northbrook, Illinois, where shiny new cash and record containers are attacked with an awesome arsenal of jimmies, punches, crowbars, torches and drills, with an engineer standing by to keep time and take notes.

"We find some weaknesses in at least 50 per cent of the burglary devices brought in for testing," says Herbert B. Michael, the department's veteran managing engineer. "I recall one safe manufacturer who came in to watch his prized new safe put through the paces several years ago. Our boys had the door open in 40 seconds —and a few heads probably rolled when he got back to the office."

Insurance companies rely on UL labels when rating safes and money chests, and encourage use of UL-approved equipment by granting substantial reductions in premiums for mercantile safe burglary insurance. For a Chicago supermarket, for example, a $10,000 policy of this type would cost about $455 a year if the manager kept his cash in a light, tool resistive safe. The premium would drop to about $227.50 a year for a heavier torch and tool resistive money chest, and to $77.50 a year for the latest, top-rated chests. Firms with lighter risks—retail drug stores, for example—could buy identical coverages for $172.50, $85 and $30 with the same three money chests.

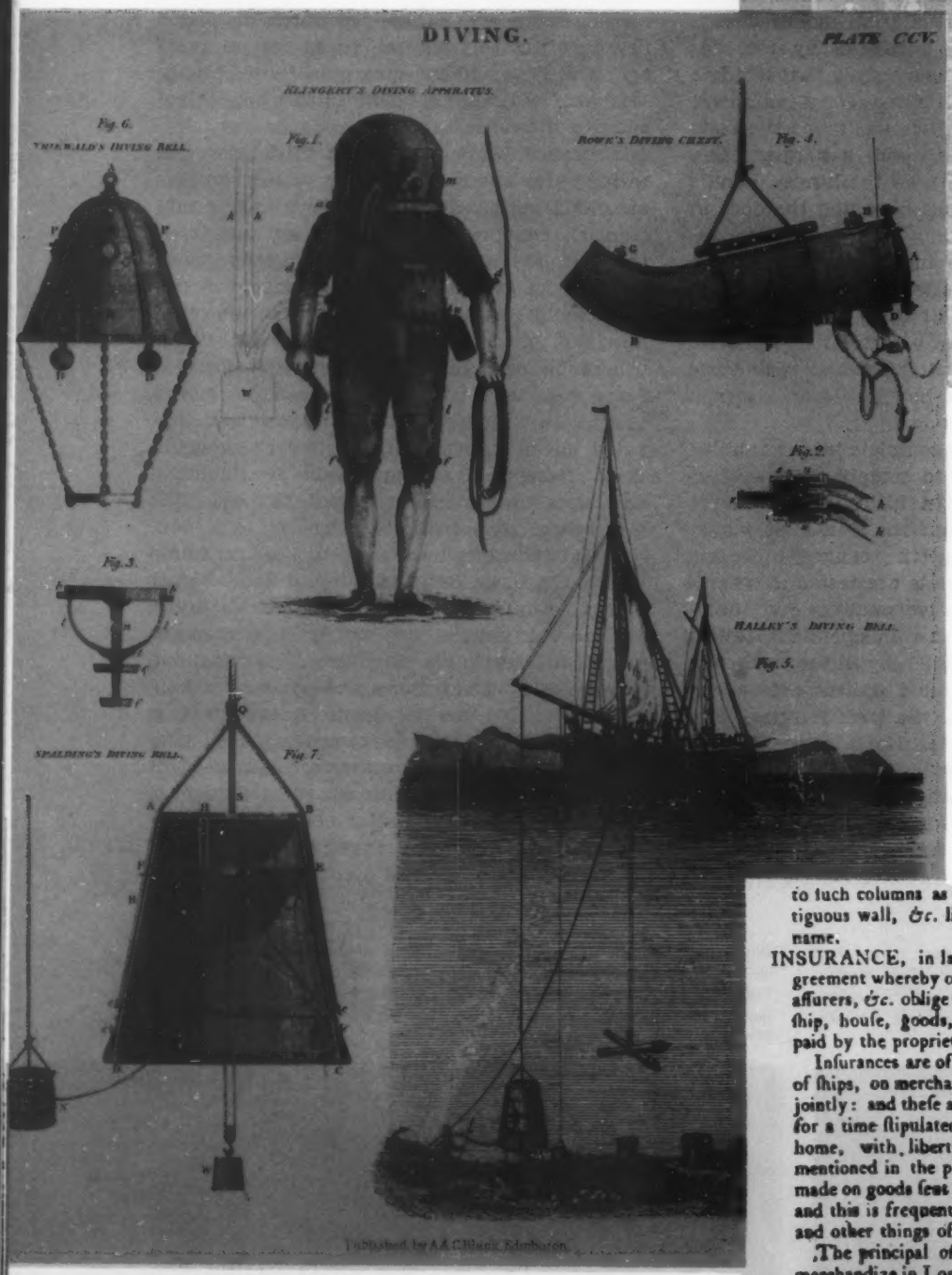
Installation of a local gong-type alarm would entitle the businessman to an additional 35 per cent discount, and the use of a central-station alarm would cut the premium by 75 per cent. At that rate, insurance savings alone will soon pay for a good safe or alarm system.

A frustrated burglar summed up the best argument for keeping a company's cash protection up-to-date, however, after trying for several hours to break into a new money chest. He fled empty-handed after chalking a grudging compliment on the rugged chest door: "too tough." ⊙

Burglars attacked the round-door money chest at left with drills and oxyacetylene torches, without success. Insulated record cabinet was easily "peeled" with hammer and crowbar.

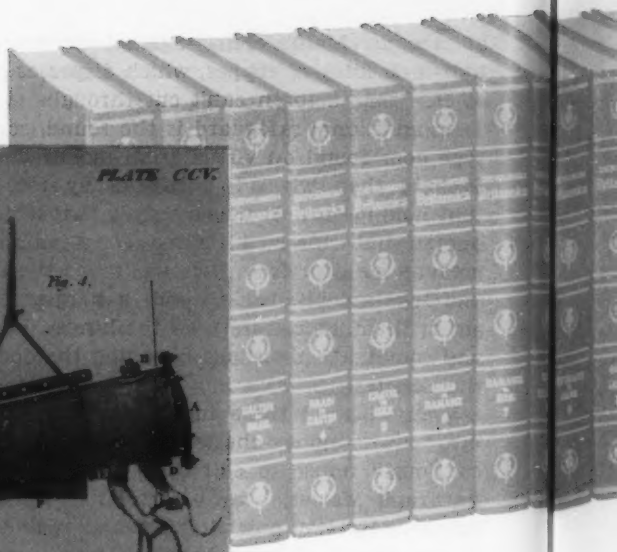
This impressive collection of safecracking tools enabled its owner to steal more than $400,000 before he attempted a robbery and was killed. Arsenal includes files, crowbars, bolt cutters, punches and five electric drills. Electromagnetic drill in foreground forced improvement in safe construction.

Diebold, Incorporated



Encyclopaedia Britannica, Inc.

Early 19th century diving equipment is pictured in this intricate engraving from an early edition of Encyclopaedia Britannica. Such equipment was used for marine salvage ordered by insurance companies.



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Encyclopaedia Britannica's 24 volumes are revised annually to keep the venerable reference work up-to-date. Sales of this set, Great Books and other Britannica publications totaled $91 million in 1960.

The insurance item from EB's first edition, published in 1768, mentions various policy forms, particularly ocean and inland marine. Mutual insurance was already established through "Friendly Societies."

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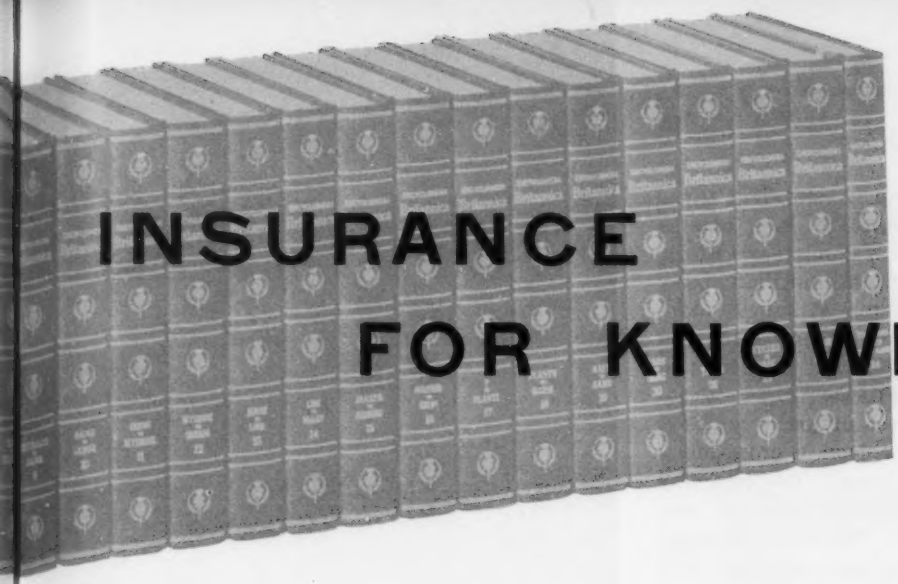
to ſuch columns as ſtand alone, or free from any contiguous wall, *&c.* like an iſland in the ſea; whence the name.

INSURANCE, in law and commerce, a contract or agreement whereby one or more perſons, called inſurers, aſſurers, *&c.* oblige themſelves to anſwer for the loſs of a ſhip, houſe, goods, *&c.* in conſideration of a premium paid by the proprietors of the things inſured.

Inſurances are of various kinds, as on ſhips or parts of ſhips, on merchandize ſingly, and on ſhips and goods jointly: and theſe are again branched out to run either for a time ſtipulated, or to one ſingle port, or out and home, with liberty to touch at the different places mentioned in the policy. Inſurances may likewiſe be made on goods ſent by land, or by hoys, *&c.* on rivers; and this is frequently done, more eſpecially on jewels, and other things of great value.

The principal offices for the inſurance of ſhips and merchandize in London, are the Royal-exchange aſſurance, and the London aſſurance, both of which are eſtabliſhed by act of parliament. Theſe offices alſo inſure houſes and other buildings, goods, wares, and merchandize, from loſs or damage by fire; and the former of them alſo aſſure lives.

The Royal-exchange inſurance, on a brick or ſtone building, inſures any ſum not exceeding 200 l. at 5s. *per ann.* and any larger ſum not exceeding 1000 l. after the rate of 2s. 6d. *per cent. per ann.* Above 1000 l. and not exceeding 2000 l. at 3s. *per cent.* Above 2000 l and not exceeding 3000 l. at 4s. *per*



INSURANCE FOR KNOWLEDGE

Encyclopaedia Britannica, two centuries old and mutual-insured, is authority on everything.

IN THE SCHOLARLY Scottish city of Edinburgh in 1768 two men of the printing trade engaged the services of a beatnik-like writer with this dignified note:

"Sir, as we are engaged in publishing a Dictionary of the Arts and Sciences; and as you have informed us that there are fifteen capital sciences which you will undertake for, and write up the subdivisions and detached parts of these conform to your plan, and likewise to prepare the whole work for the press etc. etc.; we hereby agree to allow you £200 for your trouble."

Andrew Bell, an engraver, and Colin Macfarquhar, a printer, thus hired the learned but eccentric 28-year-old William Smellie to edit a reference work partly in answer to the rationalistic French Encyclopedie. Smellie promptly forsook roistering and worked prodigiously for three years compiling articles that filled 2,659 pages in three squat volumes.

Since then the Encyclopaedia Britannica has become the most famous reference work of the English-speaking world. In 193 years it has grown in scope and scholarship as various owners have published 14 numbered editions and, since 1934, an annually revised 24-volume set. The space-age year of 1960 required contributors and editors to change more than 8 million words in 12,112 articles. Nearly half of Britannica's 27,875 pages were revised.

EB's original editorial staff of Smellie and his few collaborators has grown to more than 7,700 contributors, each a recognized authority on one or more of some 41,000 article subjects. In addition to this world-wide network of experts, Encyclopaedia Britannica employs another 200 editorial workers in its Chicago headquarters and about 75 advisers, most of them university faculty members who assign articles and edit them for technical accuracy.

Harry Ashmore, new editor in chief, concedes that he will never finish reading the book he edits, in sharp contrast with Smellie, who wrote much of the first edition.

As EB's editorial chores have expanded, its business organization has undergone a number of changes of ownership, one of which brought

James A. Philhour, assistant treasurer of Encyclopaedia Britannica, Inc., regularly reviews the firm's insurance portfolio to keep coverages current on world-wide operations of EB. Competitive bidding brought mutual companies a major share of EB's insurance program. Philhour, a graduate of Northwestern University, is a member of the board of the Chicago chapter, American Society of Insurance Management, Incorporated.

it to the U. S. from England. At different times the rights to EB were owned by such diverse organizations as the Times of London and Sears, Roebuck & Co. Publisher and chairman today is former Connecticut Senator William Benton.

In recent years EB has added such successful ventures as *Britannica Junior*, the *Britannica Book of the Year* and *Great Books of the Western World*, a 54-volume set of great writings made more useful by Syntopicon, a cross-index of the world's 102 "Great Ideas." The company recently acquired F. E. Compton and Co. and its 15-volume *Compton's Pictured Encyclopedia*, which will continue to be operated as a separate entity.

EB Gets 'Good Service, Proper Coverage'

As a diverse world-wide organization, Encyclopaedia Britannica, Inc., requires a multitude of insurance services handled by insurance management specialist James A. Philhour.

Philhour and his department look to mutual insurance for programs that meet the test of "good service and proper coverage." Employers Mutuals of Wausau, for example, underwrites EB's public liability coverage, including an umbrella policy that provides protection over and above basic property and casualty coverages. Also written by Employers is an automobile liability policy that covers both company-owned and leased cars.

Workmen's compensation coverages for 4,500 employees are provided by Kemper Insurance, as well as a blanket position bond insuring the firm against defalcations by regular employees or sales agents. "A blanket position bond," says Philhour, "is more practical and cheaper in the long run than individual fidelity bonds on certain employees. Further, such a bond does not put one in the position of forecasting who will cause a loss." Kemper also underwrites vendor bonds required of specialty salesmen by some municipalities.

Insurance complications are also introduced by foreign subsidiaries organized in Canada and Switzerland and by an editorial office in England. Loss prevention measures are taken with the regular edition of EB printed at a special Encyclopaedia Britannica plant built in Willard, Ohio, by R. R. Donnelley & Sons Co. "In process," insurance is carried on all books from inception to the time they are delivered to customers. Plates for books, the most valuable of the firm's assets, are covered by contingent insurance, and business interruption coverage applies to all of EB's printing operations and photo production services.

Research specialist Carole Berry finds answers to subscribers' questions in library research department that answers 3,500 queries per week. Owners of Encyclopaedia Britannica are invited to use free reference service.

Just as insurance covers risks of Encyclopaedia Britannica, Encyclopaedia Britannica covers the insurance industry by providing authoritative historical data and information on the current status of the industry.

Insurance Traced to Both Greeks, Romans

Even Smellie's first edition had a brief but comprehensive discussion of the origins of insurance and the way it was then operating in England. Various editions of Britannica differ as to the first uses of the principle of insurance. The eighth edition published in 1856 traces the principle to the Romans through Livy who describes government indemnification of a corn delivery to Spain. In the 11th edition, however, insurance is traced to the Greeks through

Lazy Susan arrangement for editorial workers in EB's Chicago headquarters permits quick cross-checking of all revisions. Cards in tiers are cross references to every indexed word. Each EB worker is protected by mutual insurance programs.

Proofreading of Britannica's 27,000-plus pages is done by employees of R. R. Donnelley & Sons Co. which prints EB at a special plant in Willard, Ohio. Continuous revision keeps presses rolling all year on various EB publications.

Learned contributors throughout the world and this forklift operator are among more than 12,000 persons who work on EB publications. In 1768 only one editor and a few printers brought out the first volume of EB in Edinburgh, Scotland.

Demosthenes who wrote of a rudimentary form of marine insurance.

In England, to which most early editions look for basic information, insurance regulation is traced back to Elizabethan times when, in 1601, a law governing life "assurance" was passed.

In the famous 11th edition, the principles of mutual insurance were well stated: "(Mutual insurance) has achieved great and apparently permanent success (among owners of certain classes of property). This is particularly true of manufacturing districts, in which numbers of mills or factories are exposed to peculiar danger of fire by the nature of their own operations. The best safeguard they can have is by employing great skill in the construction, arrangement and conduct of their works. A group of such properties, associated for the prevention of loss, is naturally stimulated to highest efficiency when the whole group undertakes to bear all losses which are not prevented, and thus every member has a strong interest in making the protection complete."

It is the 11th edition, published in 1911, that tells of events that followed the organization of England's first Friendly Society, the earliest form of mutual insurance.

"The rivalry between the proprietary and the mutual systems began at once, and has continued till now. In 1686 'the Fire Office at the back side of the Royal Exchange' petitioned for a patent of the fire insurance policy and a monopoly of its issue for thirty-one years. The Friendly Society opposed the grant. The most eminent lawyers for both were heard by the king in council, and on the 30th of January 1687, King James II decided the case. No charter was granted, but the Fire Office might continue its business, having a monopoly for one year. Thereafter the Friendly Society might for three months sell policies, but must then suspend for three months, and so on for alternate quarters."

Insurance practices and policies have come a long way since then, and Encyclopaedia Britannica has kept pace with them, both in its reporting and in its utilization of the services. ⊙

FEATS IN FOOTWORK

Trampolin jumping, properly supervised and insured, vies for national sport status.

IT MAY NEVER REPLACE baseball as our national pastime, but it's growing by leaps and bounds as a leisure-time activity. It's rebound tumbling.

Opening at an average rate of 10 per week, jump centers, the "sandlots" of this new sport, have become the country's newest recreational attractions. The trick gymnastics look like fun and are. However, they can be as dangerous as they are enjoyable.

The large majority of rebound centers operate under a strict safety code and are run by well-trained, safety-conscious instructors. But there are a few which are lax in supervision, causing alarm among safety officials, the medical profession and insurance industry, as well as among reputable commercial center owners.

In its short lifetime, rebound tumbling has been called everything from delightful to deadly. One parent described the jumping unit as "the best and safest toy invented for children." In sharp contrast is the case involving a 15-year-old Dallas, Texas, boy who tried, without previous training, to execute a double flip at a commercial center. He struck the edge of the unit and broke his neck.

A detailed study of five injuries received on trampolins was made recently by the American Medical Association. All of the patients diagnosed, including one fatality, suffered neurological injuries following the mishaps. Three developed paralysis of both arms and both legs. Four of the accidents occurred during the maneuver of backward somersaults.

Until last year, rebound tumbling was limited primarily to high school and college physical education programs. Participants usually jumped under the close supervision of trained instructors. Vaudeville acts in the early 1900s used tumbling nets as an entertainment feature. Actor Joe E. Brown was a pioneer in such stunts. Brown, at 68, recently performed on a trampolin to prove that tumbling is a sport for all ages. He cracked a rib executing a back flip.

Today there are commercial jumping centers springing up in nearly all states, and an estimated 10 million persons this year are expected to be "launched" from the resilient mats. This has been the cause for alarm. Like the bygone hula hoop, trampolins at jump centers became popular almost overnight, bringing with them some operators who were quick to get into the business but slow to take the needed safety precautions. The result was a wave of minor injuries plus several fatalities.

It was for this reason, among others, that the National Rebound Tumbling Association was organized to stabilize the industry by adopting standards of activity, supervision, rules and regulations. Safety education, also a part of the association's duties, includes instructing and testing jump center supervisors.

Along with erasing many of the hazards involved in rebound tumbling, the NRTA also made it easier for its members to obtain insurance coverage. Insurers' first experience with this sport was horrendous, causing many com-

Cedar Rapids Gazette

panies to cancel liability coverage on commercial centers. One insurance executive explained that the sport's danger lay in the failure of participants to realize that what goes up with force must also come down with force.

A spokesman for the NRTA believes that this year will see the sport mature, with more cities adopting the association's model ordinance regulating tumbling centers. The ordinance calls for each operator to file a copy of his insurance policy with his tax collector. This alone will discourage many "fly-by-nighters." Association members must maintain liability insurance for each tumbling unit, with limits of not less than $50,000 for any one occurrence and not less than $25,000 for any one person, per occurrence.

Another safety measure being taken by NRTA members is the posting of rules and regulations at the centers. These include: not more than one person on an apparatus at a time; no flips, twists, or other difficult routines without supervision of a qualified instructor; no jumping from one apparatus to another or to any point outside the bed frame; no children under 6 years of age allowed on the equipment unless accompanied by a responsible person; no smoking, eating or drinking on the equipment.

National Rebound Tumbling Association

Until last year rebound tumbling was confined primarily to gymnastic classes at schools. Today the tumbling units are installed at hundreds of jump centers from coast to coast.

National Safety Council

This joyful young jumper is one of an estimated 10 million persons expected to try their feet at commercial tumbling centers this summer. When supervised, sport is fun and safe.

←
Judy Haworth, a student at Washington High School in Cedar Rapids, Iowa, uses a spotting belt to maintain balance during practice session. Trampolin was first used for physical education programs at University of Illinois back in 1924.

The ordinance also requires at least one supervisor for each 12 units. Supervisors are to be 18 years of age or older and trained in the sport of tumbling.

If these rules and regulations are followed, tumbling can be an excellent form of exercise. A University of Illinois athletic instructor, who also teaches rebound tumbling to summer campers as young as 6, reports that he has treated only two minor injuries, both of which occurred while the participants were ignoring his instruction. At the Washington State School for the Blind in Vancouver, trampolins are being used cautiously but successfully.

These are instances where proper training and supervision have brightened the future of rebound tumbling. The NRTA is also hopeful that President Kennedy's announced emphasis on physical fitness will bring more persons to the canvas or nylon springboards.

Interest in the sport has already spread abroad to England, Germany and Japan. Even the people "down under," where the kangaroo formerly had the honors in jumping, are finding it fun to go up and over. ⊙

These sleuths withstand hardships to ensure bed-and-board comfort.

AAA

A MOTEL OWNER, after watching a young man check for dust along her window blinds, scrutinize a drinking glass, and then peer under a bed mattress, remarked, "I'd sure hate to be married to you."

However, the young man wasn't looking for a wife. He was a field reporter for the American Automobile Association, one of 46 men who earn their living giving the "white glove test" to thousands of restaurants, motels, hotels and resorts throughout the world.

Running interference for about 120 million vacationers who this year are expected to spend some $30 billion, the reporters travel an aggre-

THEY WAR ON TRAVELERS' W

gate of nearly a million and a half miles annually in scouting places to eat and sleep. Their work takes them through North America, Europe, most of Asia, Latin America and the tourist spots of the Orient.

Enjoyable as this may sound, the fieldmen are the first to admit that many of their days involve everything but fun. They have suffered ptomaine poisoning, have been knocked off of ladders and spent sleepless nights doing battle with bedbugs.

Elmer Jenkins, director of the AAA's national touring department, organized the first team of reporters in 1937 after association members complained of many third-rate establishments they had been forced to tolerate during their auto excursions. It was time, Jenkins thought, to establish a team of lookouts for the protection of tourists.

WOES

Before reporters are sent out to cover the vacation circuit, they receive extensive training. They spend several days in Washington, visiting various departments of the AAA headquarters to get an over-all view of the association's operations and standards.

Trainees then spend eight to ten weeks under the watchful eyes of a veteran reporter, observing the inspection routine and studying the "Field Representatives Manual," which explains AAA policies and requirements. When a trainer feels his pupil is ready, he assigns him to check several establishments alone and make reports on them. Shortly thereafter, if the reports indicate the student is prepared, he will be given a territory of his own.

As the staff of fieldmen grew, more businesses were visited. Today the AAA tour books recommend 3,300 restaurants, 10,700 motels and 7,400 hotels and resorts. This is but a small percentage of the total examined. Each establishment is visited by a reporter at least once a year, with the results made available to the association's 7 million members.

The 1960 travel guide to Europe is an excellent example of the scope of the field reporters' coverage. The 680-page volume includes everything from "Maxim's," a swank Parisian restaurant where formal dress is required, to the Sonnenhof Hotel in Vaduz, Liechtenstein, a tiny principality between Austria and Switzerland.

AAA inspections, for the first time, recently have been completed in the Middle East, Asia and the Orient. Most of the fieldmen, however, spend their time crisscrossing the United States, where the association's emblem has become a guidepost for millions of travel-happy tourists.

Nevertheless, an AAA sign is not a guarantee against imperfect accommodations, and the association still relies on its many members who are quick to report any faults they find on the road. When a complaint is lodged, a reporter is sent to make an investigation. If he finds the complaint to be valid, the business is stricken from the AAA tour books and the emblem is removed from the premises. It is the latter which best tests the fieldmen's patience.

One irate hotel owner wasn't inclined to give up his blue and white AAA sign without some resistance. A brawl developed, and the owner and reporter spent that night discussing the hotel business—in the local jail. In another case, a motel operator was sprinkling his lawn when a reporter arrived to sever AAA connections. About halfway through the emblem removal operation, the reporter was thoroughly drenched.

Insurance Plays Vital Role for Reporters

Because of the extensive traveling involved in the work, along with the many trying circumstances, an application for insurance is one of the first forms a field reporter is required to fill out before taking the job. All of the fieldmen are covered by special life and accident policies as well as workmen's compensation—especially reassuring when taking down emblems.

With the motor club's membership growing rapidly, Director Jenkins believes that surveillance by his reporters must include all types of establishments, from modest to plush, but each rated by the rigid AAA standards. "We must give each member a choice for his pocketbook, but we will not compromise on quality, cleanliness or service."

Field reporters, when making their rounds, always arrive unannounced. They first check

Turbaned doorman at New Delhi, India, hotel gives an assist to Roland Rast, AAA field reporter. Rast recently toured Middle East, Asia and Orient. His findings make up first tour book for these areas.

the neatness of grounds and buildings. All buildings for occupancy must have adequate fire exits; in those three or more stories tall, AAA insists that each floor must have at least two exits plus a sprinkler or fire alarm system. Establishments which follow this code are not only more readily accepted into the AAA folds but also are rewarded through reduced insurance rates.

Most establishments which are rejected by the fieldmen fail because of two reasons—lack of good maintenance and general cleanliness. The reporters are especially careful to check for these two misdeeds in eating places. Thorough inspections are made in dining rooms, kitchens and storage areas.

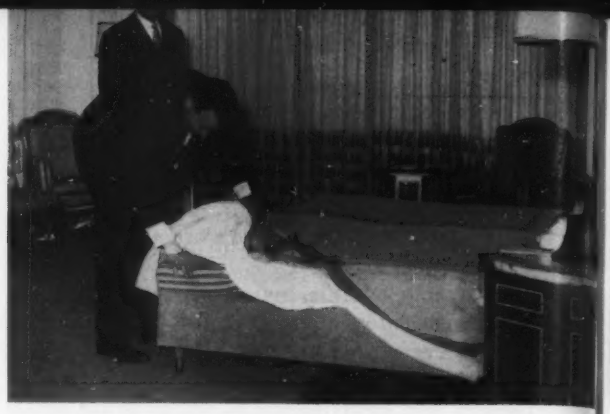
While inspecting the restaurant circuit, reporters often sit down for five to six meals a day. This can pose a problem for weight-watching fieldmen. One new reporter gained 30 pounds during his first three weeks on duty and was placed under a doctor's care. Another, known for his touchy stomach, has suffered from numerous cases of ptomaine poisoning.

In addition to being checked for cleanliness and food preparation, restaurants are also rated on service. Does the menu offer a variety of good food from which to choose? Are the waitresses friendly? Did the meal served correspond with the meal ordered? These questions, and many more, are answered in a fieldman's report to AAA headquarters.

Motels and hotels, like restaurants, must also pass the spick-and-span test. A few other essentials are: adequate ventilation; sound door lock device; good mattress and springs; clean linens, blankets, spreads and pillows; ample luggage facilities; at least one lounge chair; private bath and good lighting.

These same considerations apply for resorts. Here, however, fieldmen include in their reports the type and extent of recreational facilities.

All in all, these advance men for tourists do a commendable job. And when the time comes for their own vacations, where do most of them head? Straight home! ⊙



Hotel room gets a thorough going over by field reporter as manager looks on. Mattresses, springs, linens, blankets and pillows are just a few of the many checkpoints inspected.

Motels and hotels with kitchenettes for guests receive extra attention from field reporters, for cleanliness is vital for AAA approval. Cooking facilities are inspected for safe use.

A ring around a bathtub is enough to warrant AAA rejection. Bathrooms must have at least one bath and face towel per occupant, ventilation, good lighting and ample shelf space.

→

Restaurant kitchens must be spotless, have good dishwashing systems, garbage disposal, ventilated food preparation areas, ample storage and refrigeration room and excellent service.

SULLIVAN OF KANSAS

Commissioner Frank Sullivan credits the personnel and financial might of insurance as a major boon to state growth.

IT JUST MIGHT be that this centennial year in Kansas history may bring the heretofore incogitable fulfillment of the Sunflower State motto: "To the stars through difficulties." That would be Kansas' deserved birthright, for few states have seen and done more prodigious deeds in American history since the Jayhawk State became the 34th of the Union on January 29, 1861.

Today, in the judgment of one noted economist, "the richest and safest area in the U. S.," is centered at Eureka, Kansas, from where it encompasses a "magic circle" of 125,000 square miles. Wheat, introduced by the Russian Mennonites who came in 1874, has made Kansas the breadbasket of the world. And if Alaska and Hawaii will yield, the geographical center of the U. S. A. is two miles northwest of Lebanon, Kansas.

Kansas is forever assured of its honors as a center of public interest and sightseeing from Abilene to Yates Center and 350 tourist lodestars in between. Yates Center is the Kansas hay shipper, and Abilene was once just the end of the famous Chisholm Trail. Today it is adding new fame with the boyhood home of Dwight D. Eisenhower, the Eisenhower Museum and the Eisenhower Presidential Library. Dodge City, "queen of the cow towns," is still showing the rut marks of the old Sante Fe Trail, and Osawatomie prizes the well-preserved cabin of archabolitionist John Brown.

This Louisiana Purchase land, where the hardy pioneers of 100 years ago lived in sod houses, now nurtures a thriving industrial empire of more than 3,500 plants. To augment the raw materials supplied by diversified agriculture, Kansas has 22 basic minerals in commercial production. Petroleum and natural gas head the list. Power aplenty is available with output doubled in recent years.

Kansas has always had the space in its 82,276 square miles; now by the 1960 census it has the people for an abundant labor force—some 2,178,611 of them ranking the state 28th in population. For its transportation needs the state is served by 1,700 common motor carriers, 16 railroad lines and 166 airports.

Vitality and security for Kansas industrial development are being vouchsafed by the insurance industry under state jurisdiction of Commissioner Frank Sullivan. It produced state revenue of more than $6 million in the most recent year of record (1959) in the form of taxes and fees from the 720 domestic and foreign companies which are licensed in the state.

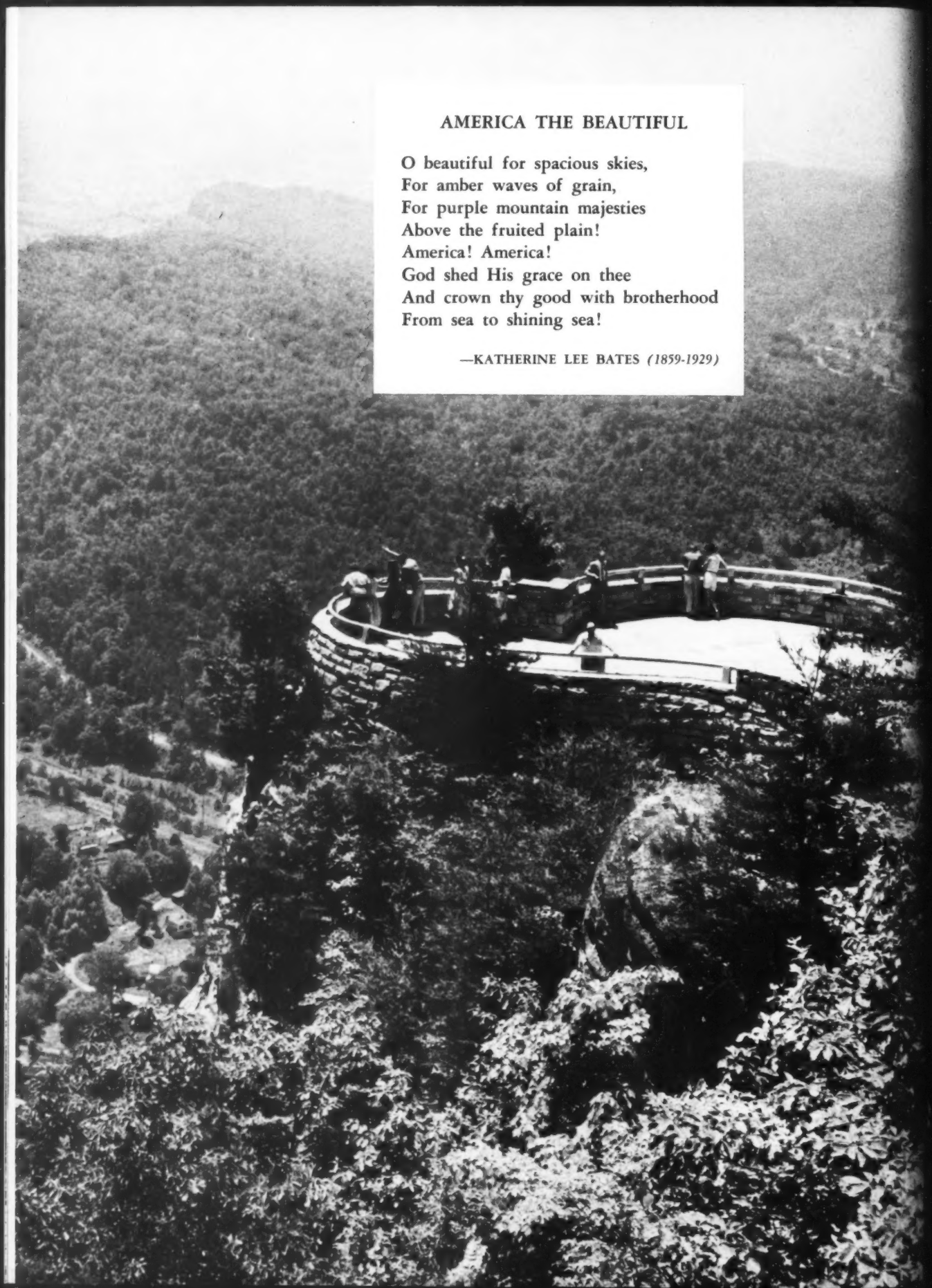
Mutual property and casualty companies alone bolstered the Kansas economy to the extent of $51 million of direct premiums written in 1959 and direct losses paid of $25 million.

Commissioner Sullivan, elected in 1946, has been re-elected biennially ever since. From year to year in a span of 15 years he has filled just one short of 100 posts in the National Association of Insurance Commissioners, including the presidency in 1951.

His first job after graduation from Fort Hayes Kansas State College in 1919 and graduate study at Kansas University was as a life insurance agent. Later he became a high school instructor and athletic director, then a superintendent of schools before serving four years on the Kansas State Board of Administration and Parole Board. He is a veteran of both World Wars and prominently active in many civic, fraternal and veterans' organizations. ⊙

Boeing Airplane Company

Largest city in the state, Wichita is first in the world in output of private planes, ranks high as a military aircraft center.



AMERICA THE BEAUTIFUL

O beautiful for spacious skies,
For amber waves of grain,
For purple mountain majesties
Above the fruited plain!
America! America!
God shed His grace on thee
And crown thy good with brotherhood
From sea to shining sea!

—KATHERINE LEE BATES *(1859-1929)*